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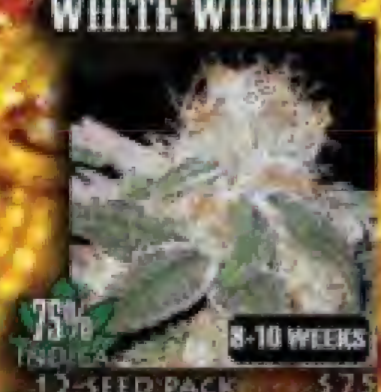
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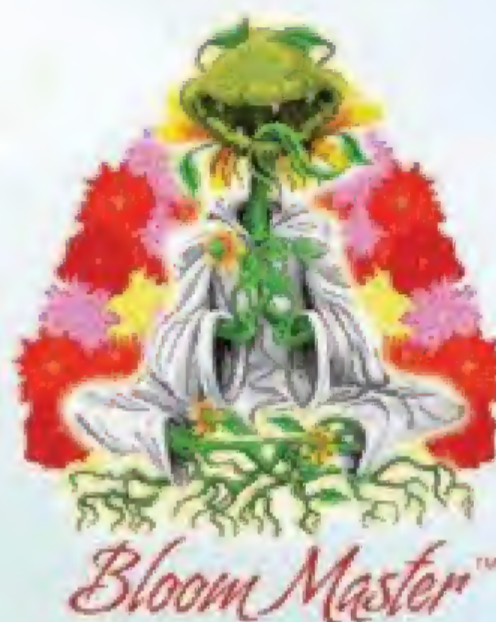
THINK OF A PROPERLY RIPENED CANNABIS BUD LIKE A PERFECT MOMENT IN TIME—
TO BE PATIENTLY WAITED FOR AND WORKED TOWARD,
THEN FINALLY CAPTURED AND PRESERVED.

The High Times Pro Guide to Harvesting—page 44

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 <i>Gibson</i></p> |
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THE PERFECT VIDEO GAME FOR EVERY SCENARIO

Some stoner stereotypes are just spot on. For instance, cannabis consumers really like video games. There's just something about getting high that makes gaming that much better. But sometimes it can be difficult to find the right game for certain occasions. Fortunately, *High Times* has you covered with our guide to "The Perfect Video Games for Every Stony Scenario."

Whether you have a group of friends coming over for a smoke sesh, just want a night in to chill by yourself, or you're looking for something seriously off the wall, our video game expert has the perfect picks for every occasion.

So before you decide what to play next, head over to *hightimes.com* and check out "The Perfect Video Games for Every Stony Scenario." Then smoke and enjoy. And be sure to check in with *HT* for additional video game content including news and reviews. **Visit *hightimes.com* for more!**



ON INSTAGRAM

It's important to keep your buds in a good stash jar in a cool, dark place to preserve the precious terpenes, cannabinoids and flavonoids (not to mention potency). But it's also good to have a cool-ass stash jar featuring an illo by a badass artist. Fortunately, @420science and @killeracid have teamed up to produce just such jars! Your weed will be privileged to be housed in such a glorious container. If you dig the style, be sure to follow @killeracid for all the trippy art you can handle.



How Do You Think Stoned Driving Should Be Addressed?

Field Sobriety Tests (visual cues, assessment apps, etc.)	25%
THC Nanogram Limits (saliva tests, blood tests, etc.)	8%
Education (Teach consumers how much pot they can handle.)	25%
It Shouldn't Be (Drunk driving is a much bigger problem.)	42%

SMOKING POLL

This month we're exploring the complexities of stoned-driving laws. As additional states legalize cannabis, legislators and law enforcement are increasingly focused on preventing stoned driving. However, the scientific community agrees that current detection methods like breathalyzers and blood tests, which were developed specifically for detecting alcohol impairment, simply don't work with weed (read more in our "Driving High" feature on page 59).

By now, most cannabis consumers have an idea of how they'd like to see stoned driving addressed. So, we decided to ask our readers how they would approach the issue.

Interestingly, most readers (42 percent) believe stoned driving should not be addressed at all, as drunk driving is a much bigger problem. Education (teaching consumers about cannabis and driving) and field sobriety tests (using visual cues, etc.) tied for second with 25 percent of the vote each. And, of course, setting strict THC nanogram limits, detected through saliva or blood tests, finished last with just eight percent support. **Take our latest poll online!**



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Tweet your best high observations and comments our way @HIGH_TIMES_Mag for a chance to be featured on this page! And be sure to follow us on Facebook (Facebook/HIGHTIMES-Mag) and Instagram (@hightimesmagazine) for all the latest news as it's happening!

@Heady_NJ: @HIGH_TIMES_Mag California: Free at last free at last, thank god almighty we are free at last...

@crazybatmanfan: @HIGH_TIMES_Mag I used to swear by hydro and would never touch dirt! Now that I switched to dirt I see the benefits of both.

@NunjyaJim: @HIGH_TIMES_Mag Remember when "homegrown" was synonymous with mediocre, midgrade leafy smoke? But hey, it wasn't brown dry and squished

@strwberrykittnz: @HIGH_TIMES_Mag What I would give to be able to openly hold up a bag of beautiful bud

@lilmiskfc: @HIGH_TIMES_Mag I must confess I'm a pure lighter thief n #proudoftit

@tommybuffometal: @HIGH_TIMES_Mag Remember Sinsemilla, Mexican & Acapulco Gold, basic Colombian? 70s stoner grateful for passage of time indeed

@EmeraldZoo: @HIGH_TIMES_Mag I still believe whole plant medicines work.

@kelly_wildcat: @HIGH_TIMES_Mag God provided weed and devil causes people to do man made drugs and crimes. I know the one I trust. I believe in weed...

@theshakeskc: @HIGH_TIMES_Mag Cookiee Wreck is one of my new favorites. Got it at Breckenridge Organic. Different but lovely smell and taste.

@dtsnarcoticsY2: @HIGH_TIMES_Mag Did Einstein smoke weed?

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Stoned driving is the next big hurdle for legalization.

THE LONG AND WINDING ROAD

THE STONED-DRIVING DILEMMA is not new. With cannabis legalization spreading, authorities have been quick to demand standardized regulations for driving high, but any semiregular smoker knows that THC impairment is not a one-size-fits-all issue. Experts agree that stoned driving and drunk driving cannot be measured the same way, and laws setting legal limits for THC-blood concentrations are ineffective at determining impairment on the road.

Longtime cannabis users often build up a tolerance to the plant's effects, and intoxication levels vary based on the method of consumption. Basically, just because a state considers a certain amount of THC in someone's blood to be "over the limit," that doesn't mean squat. All of this ambiguity has led researchers on a wild goose chase to discover a reliable way to draw parallels between impairment and evidence of marijuana in the body.

But is it all for naught? We think so... and we're not alone.

Since adult-use legalization went into effect in Washington and Colorado, neither state has seen a negative impact on traffic safety. And research has shown that once you correct for age and gender, THC-positive drivers have no statistically greater risk of crashing than sober drivers. These new stoned-driving laws have been called a solution in search of a problem, but that's not stopping scientists from delving deeper into the issue. And in this month's "Driving High" feature, we take a look at what the future holds for dank drivers.

Thankfully, it isn't all breathalyzers and blood tests. Rounding out the issue, our dab expert explores the fast-growing world of non-smokable concentrates, senior cultivation editor Danny Danko shows us Seattle's craft-cannabis scene and *High Times* sits down with Montel Williams for our feature interview.

Cannabis legalization is spreading fast, and it's beyond exciting. Just make sure you know your state's laws before getting behind the wheel blazed. Regardless of the substance, driving impaired is never okay; but getting pinched for driving with pot in your system—even if you're actually sober—is definitely not cool. Be careful out there!

Emily Cegielski
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GUN CONUNDRUM

Everyone knows that marijuana should not be a Schedule I drug. Alcohol has a terrible track record with irrational and unpredictable behavior—exactly what the feds inaccurately insist happens to cannabis users.

So why are opioid/alcohol users allowed to have guns when legally registered cannabis users are not? Not that anyone should have a gun, but there is an obvious unjust disparity here.

Jeff B.
Wailuku, Hawaii

CANNABIS CURES

I have been lucky to see the true face of cannabis over the past decade. It is not the Hollywood stereotype of getting super high and eating all the food in the house or the lazy good for nothing stoner smoking their life away. Cannabis is about giving somebody back a quality of life that has been unfairly taken from them. It gives people the ability to live a life they want to live, on their own terms. Too often today, people turn to pharmaceuticals whose adverse side effects aren't even fully comprehended.

I have seen first-hand the easing of Tourette's, seizures and cancer. I have personally helped people on their own journeys into the world of medicinal cannabis, many of whom had tried everything else. That really hits home with me. This should not be the last-ditch effort of a sick person at a chance for normalcy, it should be the first.

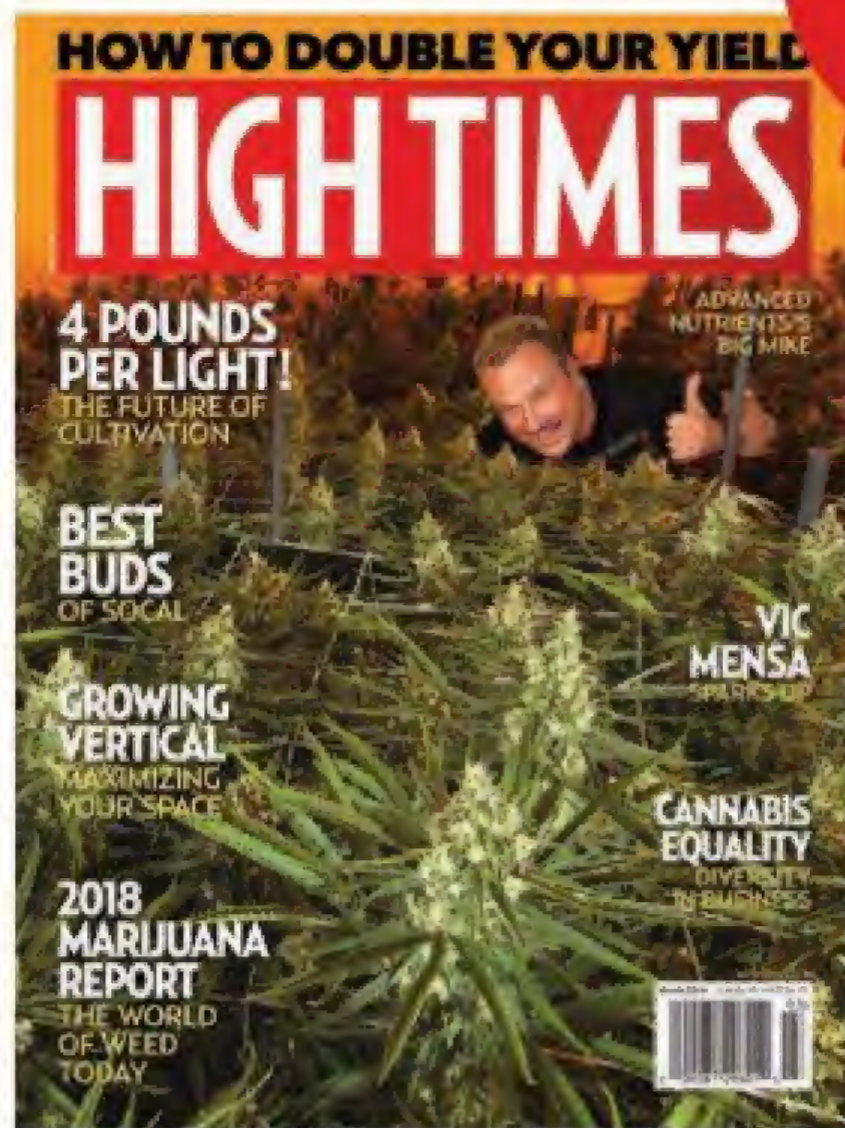
It also saddens me to see what my once pioneering state has done to an industry that started with the idea of helping others. Regulations are one thing when they are written to help people. But to regulate the number of recommendations a doctor can make for cannabis or not allow patients to grow their own medicine?

From kindergarten teachers with MS to top executives with Crohn's, cannabis doesn't discriminate and neither do their diseases. Giving people back that quality of life is my life's passion, and I truly hope that I can continue to pursue it, wherever it may take me.

JL
Seattle, WA

POT PRAGMATIST

Canada is stumbling along a very flawed road to legalization, paving the way for government-sponsored monopolies in the cannabis market and leaving no path for



"WHY ARE OPIOID/ALCOHOL USERS ALLOWED TO HAVE GUNS WHEN LEGALLY REGISTERED CANNABIS USERS ARE NOT?"

the entrepreneurs running our thriving (but currently illegal) cannabis businesses to come out of the shadows. The activist in me wants to boycott this unfair, though legal, system, until Canada offers me a better one.

The pragmatist in me, however, knows that the prohibitionists would love nothing more than for legalization to fail, opening the door to re-introducing prohibition because the black market continued thriving even after a legal one was available. That makes me think that, even if flawed, I should support the legal market, and also advocate for further improvements in legalization policy. What should Cannabisians like myself do?

Stony Stoni Stoné
Canada

JOIN THE CLUB

I reside in Massachusetts and want to let folks know that smoking and growing is more fun now that we are legal. I hope you can all join us soon. I saw our first year as a test: Are we really going to get away with this? And yes, we did.

Some folks are trying to sell their product at near store prices but there is resistance as we all know we can do it ourselves, and not get in any trouble at all.

I expect prices to drop considerably by

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this time next year (fall 2018). As an example, gray market flowers like "Christmas Cookies" should drop to \$100 an ounce. That's not just wishful thinking. We did it, so can you. Now get growing.

Cozmo
Massachusetts

POT PESSIMIST

Now that cannabis is legal there are some negative aspects. First is that there's no new stoner movies, they just don't make sense anymore. A lot of the plot and humor involved with stoner movies is breaking the law in order to make fast cash. Another downside is there's way too much weed around. Everyone I know has piles of it sitting around or hanging in a dark room somewhere.

I am from the Pacific Northwest, Eastern Washington State, which is well known for agricultural products. It is easy to grow plants outside that produce anywhere from one to 20 pounds each depending on strains and skill level.

The legendary pot farmers around here grew strains for as long as 30 years crossing their limited genetics into themselves year after year. Now everyone buys clones or feminized seeds and don't take the time to sort phenotypes. They end up with something with no immunity to pests, mildew, or molds.

I don't know how many thousand strains I have grown in the past twenty years or how many hundreds of crosses I have made over time but I always choose the best phenotypes and discard anything that is problematic.

There needs to be weed inspectors, if your weed is garbage they make you put it all in a pile and burn it. It's like having a pile of shit, the more crap you have the bigger the pile. The large volume of low quality being grown by dumb asses that have no business growing is another pitfall of legal cannabis. People have no patience, they spend three to six months growing and don't want to put the extra effort into curing, drying and trimming. You can grow the best weed in the world but if you don't know how to cure it turns to crap.

Ben
Washington

We appreciate a cannabis curmudgeon here at HT. But, if we may, we'd like to offer a counterpoint: Legal weed is good.

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HARVESTING Taking down, drying and curing your plants is the final step in a long process and can be difficult to navigate without the right equipment and information. Get the lowdown on all of the tools and know-how you need to harvest properly from Erik Biksa on page 44. *Photo by Justin Cannabis*







CRAFT CANNABIS Behold these beautiful and frosty ONYCD (Original New York City Diesel) plants from Top Dawg Seeds growing indoors at House of Cultivar in Seattle. Start learning about how they achieve both cannabis quality and quantity on page 66. *Photo by Jennifer Thomas*

**CONTACT
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CONCENTRATED CANNABIS Part III of our concentrates series explores the many advantages of non-smokable extracts, including using distillate and crystalline in edibles, tinctures and topicals for consistently potent results. Learn more about these exciting extracts on page 80. *Photo by Olegmalyshev*

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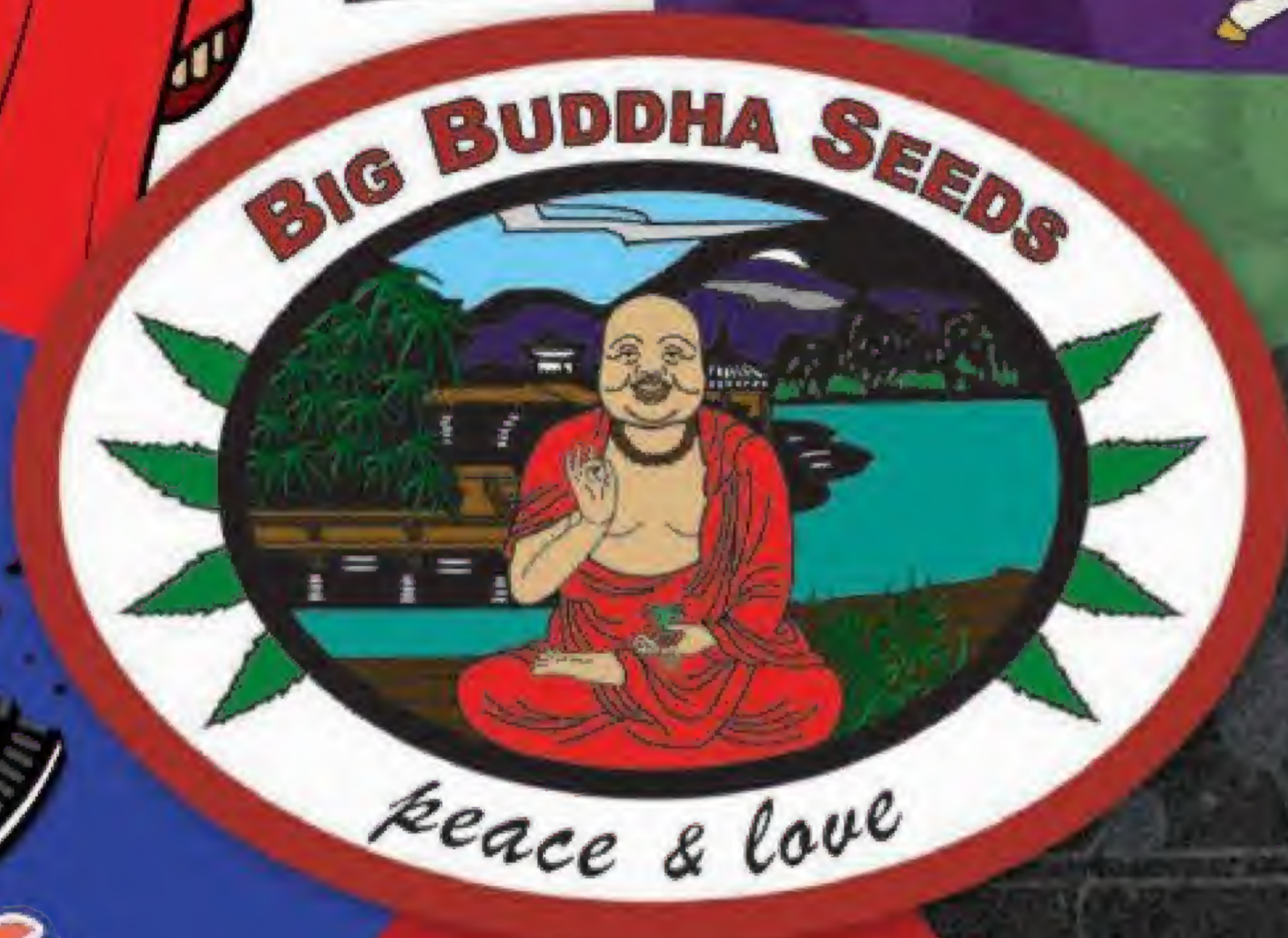


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STYLE

DOPE NAILZ

Finally, a nail polish for stoners! Check out Dope Nailz Lacquer, available only at dispensaries. p.30



ENTERTAINMENT

HIGH & DANDY

The Dandy Warhols catch up with *High Times* to chat about weed, recording and hitting the road. p.32



Toronto's 420 pot rally at Yonge-Dundas Square



stores, whereas in New Brunswick government-run stores will handle sales (with advertising or window displays banned). Quebec has twice asked to put off legalization for a year, but the requests were denied. As of this writing, only Ontario has passed marijuana legislation, while other provinces and territories are still working out the kinks.

One point of friction between the national and

CANADA GOES GREEN

CREATING A NATIONWIDE LEGAL ENVIRONMENT CAN BE COMPLICATED. FROM SEA TO SEA, PROVINCES AND TERRITORIES ACROSS THE GREAT WHITE NORTH ARE GEARING UP FOR THE SUMMER ROLLOUT.

BY MIKE DIPAOLA

WHILE MARIJUANA ADVOCATES in the United States fret over the fate of the green revolution, their neighbors to the north are going all-in. This summer, Canada will become the first G7 nation to legalize it for all adults. (It would have been the first country in the world, period, but Uruguay got there first.)

Canadians do like their weed. They consume about 700 metric tons of it per year, spending around \$5 billion on the green, or about as much as they spend on wine. Many observers think July 1 is the launch date for legalizing, but Prime

Minister Justin Trudeau dispelled that idea, since the target was always “summer” 2018. Some locales could be toking up as early as June 21. “The date will not be July 1, I can assure you of that,” Trudeau said recently. “I don’t know where that date came from.”

The federal government is setting guidelines, but the country’s 10 provinces and three territories will each create their own legal frameworks for selling and controlling cannabis within their own borders. In Ontario and Nova Scotia, for example, weed will be sold in liquor

local governments is money, specifically the tax revenues generated by the new legal market. Trudeau originally proposed a 10 percent federal excise tax on cannabis products with revenues to be divvied up 50-50 between the provincial/territorial and national governments. But the provinces and territories argued that it was on them to cover most of the costs of legalization, from creating the framework for distribution and retail sales to policing and public health, so they wanted a bigger cut—a 75 percent share of the tax haul—and they got it. The federal government will take its 25 percent, but even that will be capped at \$78 million per year, with any surplus going back to the provinces and territories. Of particular interest to the individual consumer: The federal government recommends that the ideal final price for a gram of pot be no more than \$8, in order to edge out the black market.

« A look at the customer base throughout Canada reveals an interesting demographic. More older Canadians are into weed with fewer minors toking up, according to a recent study by Statistics Canada. The overall population of pot users (around five million) is growing, but it's also growing older. While the minimum age to make a pot purchase, as set by the federal government, will be 18, the provinces and territories can raise that if they wish.

Like the United States, Canada has a significant Native American population, and some want in on the coming weed market. Three Manitoba First Nations plan to open retail cannabis locations on treaty land, including in downtown Winnipeg. "The war on drugs, or in this case cannabis, is over," declared Chief Christian Sinclair of the Opaskwayak Cree Nation during a press conference. "That allows us to participate and now initiate a war on poverty by taking the resources that we can develop from this initiative and apply it to strengthen our governments and our societies as First Nations going forward."

Phil Fontaine, CEO of med-pot company Indigenous Roots, has been talking

LIKE THE UNITED STATES, CANADA HAS A SIGNIFICANT NATIVE AMERICAN POPULATION, AND SOME WANT IN ON THE COMING WEED MARKET.

to First Nations across the country about new possibilities in the cannabis market. "This is a unique opportunity," Fontaine told the *Canadian Press*. "This sector is different than any other the indigenous community has experienced. Everyone is starting off at the same point."

Not all First Nations groups are thrilled with the coming legalization. Some indigenous community leaders, such as Tunu Napartuk, mayor of Kuujuaq in northern Quebec, are concerned about the effect legal weed will have on the youth. "If there was a way to convince any level of government of not legalizing marijuana, I would use that tool," Napartuk told CBC News.

The country as a whole is still grappling with some significant issues. Edibles will not be legally available for sale in 2018, even though the government recommends against smoking the herb. Can landlords prohibit tenants from consuming at home? Undecided.

Will employers be allowed to test their workers, or fire them if they test positive for a legal substance? Unknown. And it is still a mystery how law enforcement will handle drivers who may be under the influence, in part because there's no reliable roadside test available. Police in Edmonton, Ontario, have been studying legalized regimes in Colorado and Washington State to see how law enforcement handles cannabis-related problems. Many observers agree that Canadian lawyers will be doing brisk business in the coming months as legal issues arise.

Legalization is a complicated process, not least of all because the consequences will affect so many stakeholders. Establishing the rules and regulations for the sale and distribution of a product intended for adults across multiple jurisdictions requires delicate negotiations. We salute the hardworking Canadians who are making this happen. Come this summer, and forever more, you will be known as pioneers. ✨

HIGH FIVE By Frank Gregory

THE OPPOSITION

DESPITE GREAT STRIDES IN POT-LAW REFORM, SOME INDUSTRIES CONTINUE TO SUPPORT PROHIBITION.



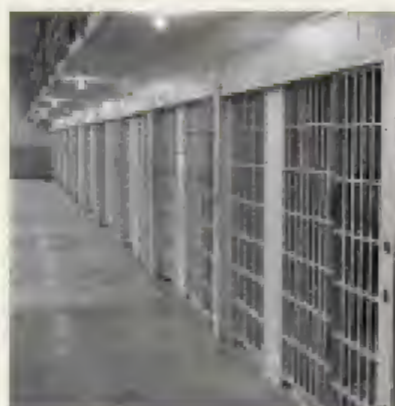
LAW ENFORCEMENT

Nothing has changed in terms of the police's position on marijuana. Law enforcement continues to block cannabis at every turn and uses cheesy propaganda to maintain the status quo—after all, the War on Drugs has done wonders for police coffers. Besides providing generous budget funding, prohibition continues to benefit law enforcement through asset-forfeiture programs in which seized property can be auctioned off for additional proceeds. Funds are often used to further the militarization of police forces around the country.



BIG PHARMA

Well-substantiated evidence of marijuana's effectiveness for pain management has the pharmaceutical companies running scared. While some are attempting to integrate pot into pain-management products—much to the chagrin of whole-plant-medicine advocates—most companies prefer the status quo. This prevails, despite the fact that the US life-expectancy average has recently dipped thanks to opioid-overdose deaths skyrocketing into a domestic crisis. Big Pharma continues lobbying against cannabis with generous funding for anti-legalization campaigns.



FOR-PROFIT PRISONS

The privatization of prisons has created yet another foe of marijuana legalization. Private-prison companies have a vested interest in fending off legalization for profit motives. It's actually quite simple: More marijuana convictions lead to fuller prisons and more profit. These companies feel substantially threatened with the rollout of adult-use cannabis laws. Statistics indicate that the spread of legalization to varying degrees among states has resulted in an estimated \$2 billion loss in value. Not good for business, eh?



PRISON GUARDS

Prison-guard unions are well funded and have succeeded historically in influencing legislative policy. In 1994, they influenced the enactment of the "three strikes" ballot measure in California. In 2008, they campaigned heavily and spent large sums to defeat a measure to create prison-diversion programs for nonviolent drug offenders. In 2014, partnering with the anti-pot group Drug Free Florida, the unions helped defeat a medical-marijuana measure. And in 2015, they were successful in defeating a measure for asset-forfeiture reform.



FORESTRY

Production of hemp would threaten current paper production driven by the forestry industry. In fact, the forestry industry has a long and sordid history of opposing cannabis's cousin. The drive to repeal US hemp production began in the '30s with the influence of newspaper magnate William Randolph Hearst. Hearst owned thousands of acres of forests and wanted them used to create paper for his newspapers, a strategy of vertical integration. Another industry, forestry trucking, also has a vested interest in continued prohibition.

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GUN SMOKE

Gun-owning Hawaiians who happen to be medical-cannabis card holders were alarmed in November when the Honolulu Police Department demanded they surrender their firearms. “Your medical marijuana use disqualifies you from ownership of firearms and ammunition,” Honolulu Police Chief Susan Ballard wrote in a notice to card holders, as reported by the *Honolulu Star-Advertiser*. “If you currently own or have any firearms, you have 30 days upon receipt of this letter to voluntarily surrender your firearms, permit and ammunition to the Honolulu Police Department or otherwise transfer ownership.” But the backlash to the move was so negative the department quickly rescinded the order and said it was reviewing its options. “We in Honolulu want to develop a policy that’s legally sound and serves our community,” Ballard said in press release. For now, one can enjoy medical-pot privileges *and* Second Amendment rights, although no new gun permits will be issued to patients for the time being.

BOTCHED BUST

A Kansas couple will not be receiving any money for damages after Johnson County officers raided their home looking for (but not finding) weed. Adlynn and Robert Harte said that deputies lied to a judge to obtain a search warrant for their home—an understandable allegation since the warrant had been based, in part, on tea leaves found in the Hartes’ garbage. The couple, both former CIA agents, were targeted in a SWAT-style raid in 2012 after Robert was seen leaving a store that sold hydroponic gardening equipment. Soon thereafter, assault-rifle-wielding police raided their home, finding only tomato plants—being grown hydroponically. The raid came on 4/20, a day for which the cops had planned a series of marijuana busts they called “Operation Constant Gardener.”

JUST SAY BLUE



A Sheetz convenience store in New Kensington, PA, is trying out a quirky idea to discourage drug use: blue lights in the toilets. “The blue light system makes it so that somebody who is looking to inject heroin or an opioid can’t find their veins,” Sheetz spokesman Nick Ruffner explained to the *Valley News Dispatch*. Westmoreland County, where the Sheetz store is located, has seen a dramatic rise in overdose deaths over the past decade. As antidrug schemes go, this one seems both desperate and futile. Tim Phillips, executive director of Westmoreland County’s Drug Overdose Task Force, doesn’t think the blue light is going to stop many people from shooting up. “The bottom line is, if they’re going to shoot dope, it’s not going to stop them,” Phillips said. “You can find a vein just simply by feeling. It might be an initial distraction, but I really don’t think it’s going to deter them a whole lot.”

INSIDE THE WIDE WORLD OF WEED



Cheech knows cannabiz!

CHEECH GOES LEGIT!

Notable marijuana enthusiast Cheech Marin has a new gig: showing Californians how to get their paperwork in order before launching their cannabusinesses. Marin appears in a new public-service announcement that publicizes the California secretary of state’s website for potential ganjapreneurs. Timed to coincide with the week the state began accepting applications from retailers, distributors and testing labs seeking state licenses, the PSA features Marin behind a computer monitor in the secretary’s office, letting a would-be cannabiz owner know where to find all the info she needs to get started: cannabizfile.sos.ca.gov. The secretary himself, Alex Padilla, who also appears in the video, asked Marin to appear in the PSA after meeting him at a Los Angeles restaurant. “It knocks off a few hours of the community service I have to do,” Marin told the *Sacramento Bee*, although he may have been joking.



Not yet an official currency...

POUND FOOLISH

A Vail, CO, man saw an SUV he fancied on Craigslist, but rather than offer cash for the vehicle, he thought he would barter for it with four pounds of “homegrown black-market” marijuana. Shawn Langley, 39, texted the owner with pictures of big bags of dope and testimony to its high quality. Little did he know that the owner of the car was the county sheriff. “You

want to know the truth? I saw that text, and I started giggling,” Teller County Sheriff Jason Mikesell told the *Gazette*. Mikesell set up a time and place for an ostensible swap of goods, but instead of an SUV, all Langley got out of the deal was busted. The cops confiscated the four pounds of pot and arrested Langley with his partner in crime, Jane Cravens. Cravens posted a \$5,000 bond, but Langley was still languishing in the Teller County jail at the time of this writing, on a \$10,000 bond.



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NOT A SWEET DEAL

Sweet Leaf, one of the largest cannabis businesses in Colorado, was abruptly shut down by police in December. Multiple locations, 10 in Denver and one in Aurora, were shuttered after authorities said Sweet Leaf employees were selling more than the legal limit—one ounce per day per customer. As a result, the Department of Excise and Licenses suspended 26 of Sweet Leaf's licenses. According to the suspension order: "Reasonable grounds and probable cause exists to believe that respondents have engaged in deliberate and willful violations of state and local laws or regulations, and/or that the public health, safety and welfare requires emergency action." Sweet Leaf representatives said, in an emailed statement to the *Denver Post*, that they were unaware of any violations taking place. "Sweet Leaf is cooperating with the authorities to resolve this issue and hopes to have all of their stores back in operation as soon as possible."

FLORIDA MAN

An Orlando man had to be rescued by the fire department after stealing a swan boat, then stranding himself on a fountain in the middle of Lake Eola. The gent, 36-year-old Keith Thurston, was reportedly hopped up on ecstasy at around 3:30 a.m. when he pinched the boat from a lakeside rental joint, then pedaled out to the fountain. Police said Thurston forgot to tie up the boat, and, when it drifted away, he sat down and began yelling for help. No charges were immediately filed, but the Orlando Police Department said it was checking with the boat-rental company to see if any were warranted. The police report of the incident was refreshingly sympathetic: "Before Thurston was transported he explained he ingested a large quantity of Molly (MDMA) and wanted to be with the swans because they didn't judge him."

RACISM ACROSS THE POND



Black people in the United Kingdom are eight times more likely to be stopped and searched for drugs, while white people are more likely to actually be carrying drugs. This is according to a recently released annual report by the UK's Inspectorate of Constabulary, which examines the efficacy of policing across England and Wales. The good news: More than three-quarters of police forces were found to be "good" or "outstanding" overall. Not so good: People of color apparently trigger "unconscious bias" in law enforcement, and so are often the victims of stop-and-frisk encounters. "Of particular concern is the continuing over-representation of black people in stop and search figures," said Inspector Mike Cunningham. "Forces must be able to explain the reasons for any disparity in their stop and search figures if they are to enhance the trust and confidence of all communities." The report recommends more training to tackle bias among law enforcement.



Locked, loaded and dank

POT BOOM

Pot smugglers in Mexico have been using a cannon to blast bundles of weed over the border into Douglas, AZ. Mexican authorities found the big gun in a van on the Mexican side, in Agua Prieta, along with 1,800 pounds of weed divvied up into 900 cannonball-size packages. Transnational pot-flinging has been reported elsewhere in the area lately, according to the *Arizona Daily Star*. In February of last year, Border Patrol agents discovered a weed-tossing catapult attached to the border fence near Douglas's port of entry. In December 2016, a pair of teenagers were nabbed in Cochise County, AZ, after receiving cheeba missiles fired by an air cannon over the border fence into the United States. Three months before that, authorities in Agua Prieta found an air cannon inside a van used to shoot pot packets into Douglas. If the US president ever builds his "big beautiful wall," we can expect more artillery fire from south of the border.

BEYOND DUMB

US Attorney General and general irritant Jeff Sessions has launched his first big salvo in the idiotic and futile War on Drugs. In January, the nation's chief law enforcement official announced he is rescinding an Obama-era policy—the famed Cole Memo—that had been instrumental in allowing states to legalize marijuana. Sessions will instead leave it to federal prosecutors to decide how to enforce federal marijuana law, even in states where weed is legal. Reactions to Sessions's ill-advised move were swift and brutal. Congressman Keith Ellison's (D-MN) tweet was typical of the backlash: "The war on drugs didn't stop drug usage; it just ruined a lot of lives. Jeff Sessions is reviving it because he believes in using the criminal justice system as an instrument of racial and economic control of poor people and brown people." An unpopular administration just figured out a way to piss off even more people. Heckuva job.



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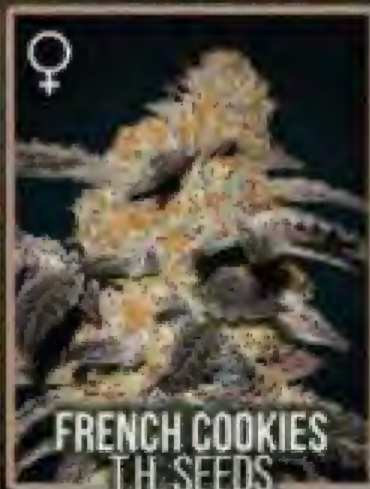
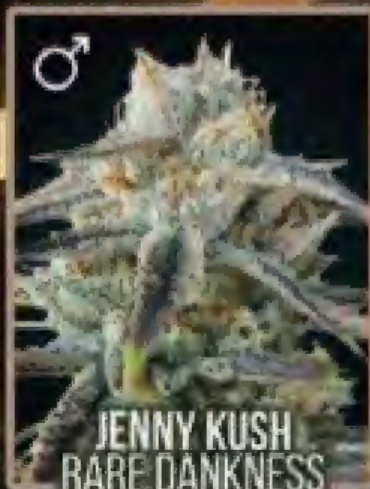
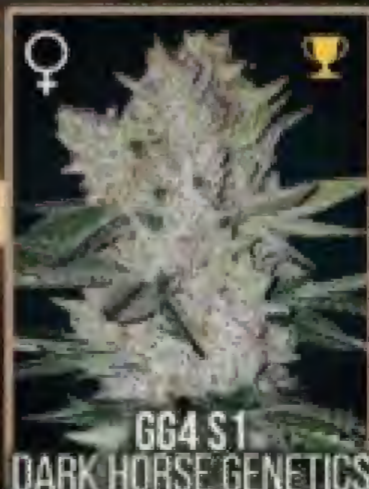
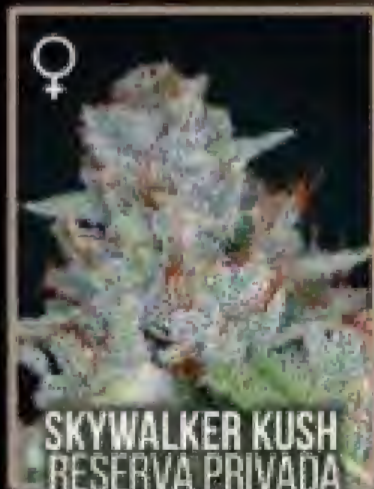
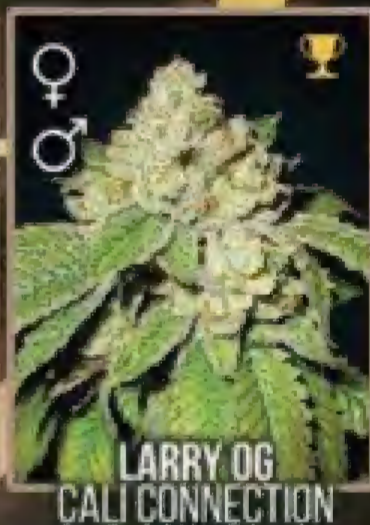
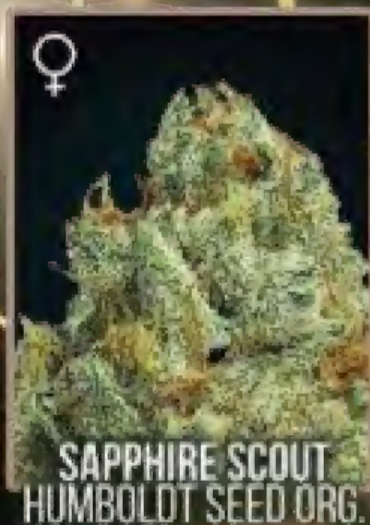
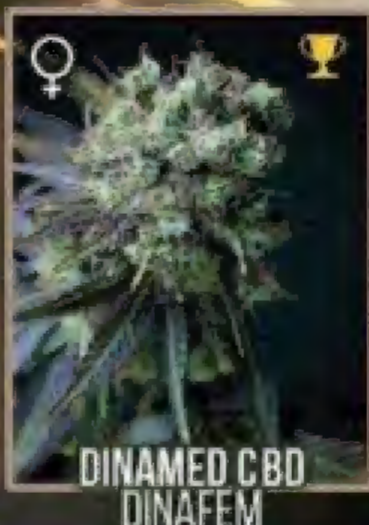
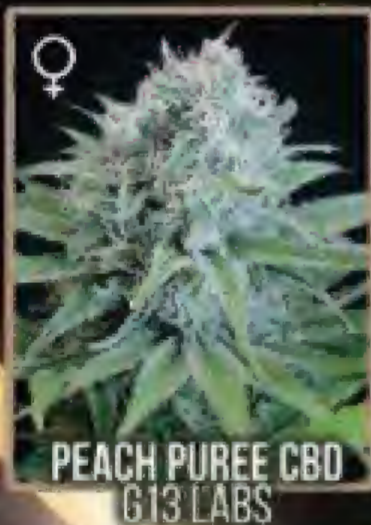
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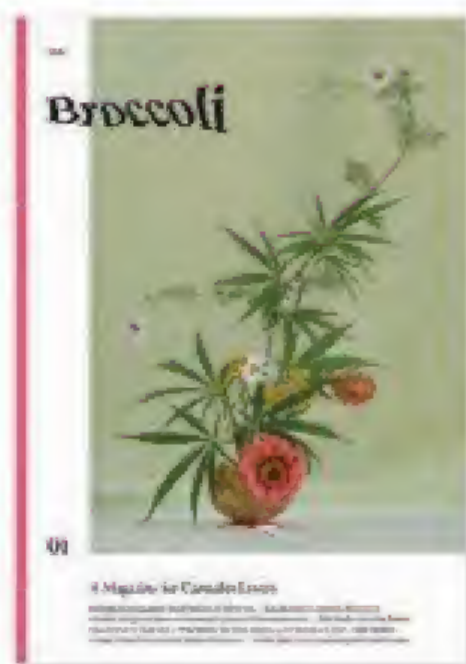
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JOINT FORCES

Smoking-accessory company Asche Industries has joined with cannabis fashion brand Blunted Objects to create a limited-release, four-piece functional fashion collection. Designed to transcend everyday routines and elevate your smoking experience, the collection consists of a gold weed-grinder pendant, a roach-clip bracelet and a lighter sleeve, plus a black-leather, gold-zippered pouch to store your stash in. This collab is super-stylish—make a smokin’ statement with individual pieces, or rep out front with the whole collection. Visit bluntedobjects.com and ascheindustries.com.



BROCCOLI IS GOOD FOR YOU

The marijuana industry is a bro-heavy culture. While the legalization and normalization of cannabis has pushed back against decades of men dominating the black market, most facets of the current weed industry have a disproportionate number of males running the show—from grow operations to weed shops to magazines.

“So the idea doesn’t offend you?” the female docent asked me at Portland’s outstanding downtown dispensary Serra. I had inquired about her shop’s upcoming party to launch a new cannabis publication written entirely by women, called *Broccoli*.

Apparently, scores of Serra’s male customers had been mocking the idea of *Broccoli*. But *Broccoli*’s packed opening night at Serra turned out to be one of the liveliest cannabis events the Rose City has ever hosted. It was attended equally by a stoned hipster elite and regular bros

looking to score an eighth of dank Pruf Cultivar.

The magazine itself is a magnificent minimalist picture book, with incisive essays on everything from ambient musician Midori Takada to the science of CBD molecules. A particular triumph of *Broccoli* is a gorgeous photo spread, by Amy Merrick, of cannabis flower arrangements.

Subscribe to the thrice-yearly *Broccoli* for free at broccolimag.com. Tommy Smith



SPOTLIGHT

DOPE NAILZ LACQUER

Pretty up your fingertips with Dope Nailz Lacquer, a nail-polish line sold exclusively in selected dispensaries and online. Designed for weed lovers, with a gold leaf stamped on each bottle, polishes are named after strains like Green Crack (an army-green hue), Blue Dream (deep marine) and Super Lemon Haze (sunny yellow). There’s even a shade named Mary Jane—an everyday nude polish that’s perfect for all occasions. Stop by one of the dispensaries that carries the dope collection, or peruse the whole line at dopenailz.com.

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Portland's fab four know how to roll.

AS DANDY AS EVER

THE DANDY WARHOLS WORK SMART, NOT HARD, TO PRESERVE SANITY AND KEEP ENTHUSIASM HIGH AFTER TWO DECADES TOGETHER.

STORY & PHOTOS BY STEVE PAYNE

IN LA FOR two sold-out shows at the Teragram Ballroom, two members of the Dandy Warhols—front man Courtney Taylor-Taylor and keys/bass/vocalist Zia McCabe—chatted with *High Times* backstage before the gig.

THE FIRST TIME

Courtney Taylor-Taylor: I was a '70s kid, so I don't even remember when I first smoked pot. I might have been 10 years old. *Playboy* magazines and black-light posters, hanging out in friends' bedrooms, who knows when that was. Maybe I was 9... or 12—who knows?

SYNERGY AND SINSEMILLA

Zia McCabe: The band was the only thing for years. Constantly touring, packing and unpacking. There's wonderful things about having a life in a place [Portland], but there's also something wonderful about leaving that place from time to time, and when we get this just right, we

get to appreciate both worlds. Getting along with other humans is not easy, and we aren't even easygoing people. We have opinions, baggage and grudges, but we also really appreciate each other and we love what we do together so much that it's worth it. Somehow, what the four of us bring synergistically has created this project... that just keeps going and going.

CTT: Fans have flown in from all over the country and the world to follow us from LA to San Francisco and Oakland, to Portland's Crystal Ballroom for the Cowboy Christmas. We're playing a whole lot of new songs and if we switch out the first song, it's gonna feel like a different set for the people following us... Right?

ZM: We'll rehearse for an hour or so, then take a "break," and when we get back our perspective may have changed, sometimes

wildly, and it changes the way the music feels and the way we relate to each other. Same thing when we're recording. You can get lost in the weeds, then smoke some weed and come back with a heightened sensitivity. You might be less focused, but you're more clear on what feels right and what feels wrong. This is probably why cannabis and art go so well together. When I DJ stoned, I'm hypersensitive to what should and should not be played.

THE GREEN RUSH

ZM: Nowadays the pot industry up in Portland is like a gold rush. It's everywhere. It's amazing. Friends are growing it—and I

"GOING TO A SHOW STONED IS WAY BETTER THAN GOING TO A SHOW DRUNK. RATHER THAN PROHIBITION, THEY SHOULD HAVE MADE IT CULTURALLY UNCOOUTH TO BE DRUNK. GOING TO A SHOW DRUNK IS LIKE NOT EVEN REALLY GOING TO A SHOW."

might when I'm not traveling so much. It's a great alternative to alcohol. Going to a show stoned is way better than going to a show drunk. Rather than prohibition, they should have made it culturally uncouth to be drunk. Going to a show drunk is like not even really going to a show.

CTT: I liked it when pot smoking was illegal. You'd meet in a bar for a few drinks, then go over to someone's house to burn one. You'd listen to their music, meet their friends... That's never really going to go away, I hope.

ZM: I'd choose cannabis over alcohol in almost every situation. I've seen a few "dab 'til they drool," but it's rare—and they won't need to go into rehab.

STAYING POWER

ZM: We've been working on a new album and I have to say, I'm more excited about this one than the last three. It's so good to be that excited about something like this after 24 years of being in this band. That's a long relationship. It's like music is our sex. I guess that's an odd analogy, because we get paid for our music—but you get what I mean. ✨

The Dandy Warhols' 10th studio album will be out in early 2018.

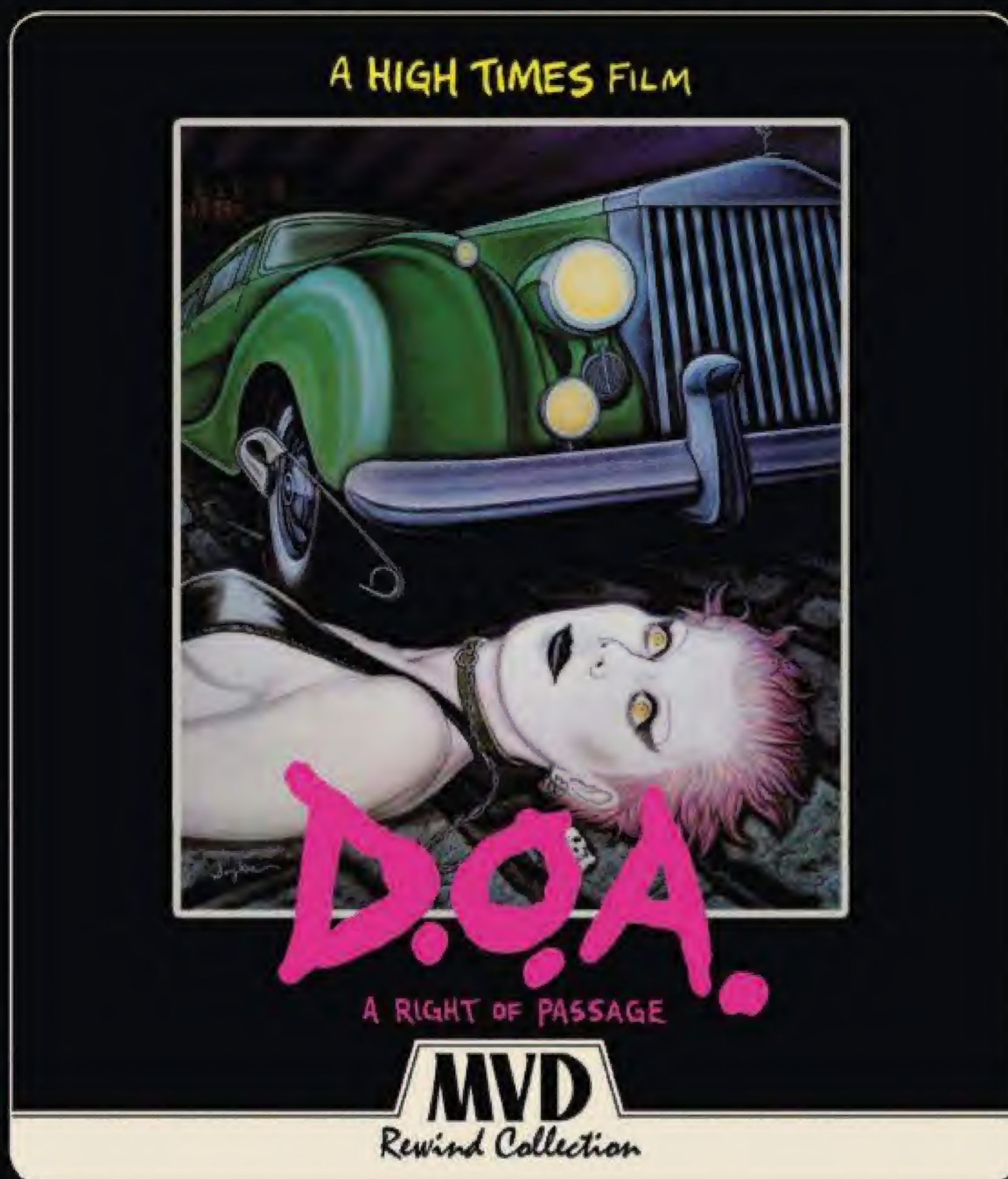


ALL TOGETHER NOW

Zia on the support of pot companies: "Denver's Sacred Seed has a gorgeous shop, and they've paid for me and other artists to come and DJ at their events. We've played gigs we'd never have been able to without the support of the pot industry."

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While dabs are preferred, there's always a place for pot.

TAKE THE TWIDDLE TRIP

THE UPLIFTING GROOVES AND FEEL-GOOD VIBES THAT POWER THIS VERMONT QUARTET ELEVATE YOU TO THAT HIGHER GROUND. BY JEN BERNSTEIN

IF YOU'RE PAGING through this magazine, suffice it to say that you love weed. A lot. So when you read about this band of dudes who hail from the green state of Vermont, it shouldn't come as a surprise (though it did for me) that they know their way around a rig and can talk the cannabis talk. It's rare that this reporter feels inadequately prepared with enough weed, but lucky for me these guys came locked and loaded.

Sitting on the glass countertop of Twiddle's backstage dressing room is a gleaming and gigantic slab of amber-colored concentrate. "We've gotten a lot more into concentrates these days," says Mihali Savoulidis, the group's guitarist and singer-songwriter. "I think it was Brook [Jordan] who got us into it"—he points in the direction of the band's drummer. "We call it digital and analog—some of us still roll analog, but we've mainly switched to digital because it's

easier to travel with, doesn't smell as much and you can keep more of it."

For the foursome, who average 100 live shows a year (plus their own music festival, Tumble Down), crisscrossing the country can be tricky, especially navigating nonlegal states in the Midwest and the South. "We have to be careful on tour—and having really beautiful stinky buds may not be the best thing for the tour bus," says Savoulidis. "But going digital or hitting a pen lets you take a quick hit and go about your day."

As much as weed contributes to Twiddle's day, music plays just as significant a role. The band shares what they're listening to with one another, from funk to classical to reggae. Each member's diverse taste informs the band's unique sound.

Jordan credits his personal transition from skateboarding and listening to metal and punk to smoking weed, getting into bands like 311 and mellowing

out. "311 was a nice segue from the harder stuff into some of the more groove-oriented and stoner-esque music," he says, "but I was influenced by pretty much everything."

Just like the music of fellow Vermonters Phish, Twiddle's sound can be hard to define, and they can't simply be labeled as a jam band. Their sound has a depth, and it also soars, always reaching for that musical high. For instance, "Dr. Remidi's Melodium" takes fans on a sonic journey with danceable reggae grooves and shredding guitar licks that melt into classical compositions. "It's a blessing and a curse," says Savoulidis when asked how he describes Twiddle's sound. "We stray

in all directions. Funk. Disco. Latin. Classical. We have a lot of rhythm."

As for being compared to Phish and the Grateful Dead, the only similarity the band sees is the scene: "It's people with the same mind-set. And that's the same we see with our fans—positivity and open-mindedness, and being part of a community."

Enjoying being one with the green holds true for the Twiddle ethos. While on tour, they're definitely conscious of how much plastic they use and accumulate. "We're always trying to figure out how to make this tour or the next better for all of us, the environment, and eliminate [waste] and be better about it," says Savoulidis.

Keep up with the guys at twiddlemusic.com for upcoming tour announcements. ✨



HOMEGROWN

Savoulidis knows what he likes when it comes to weed: "I've always loved Sour Diesel, Strawberry Cough and some of the older strains I still love. Our buddy grows a really mean Blue Lotus, and Blue Dream has always been around us."



AFTERNOON DELIGHT

A COLLECTION OF SOOTHING CANNABIS-INFUSED TEATIME RECIPES.

IN HER BOOK *The Cannabis Spa at Home*, author Sandra Hinchcliff outlined how to infuse olive oil and create DIY recipes for terpene-filled soothing salves and balms. Now Hinchcliff has turned her attention to the art of tea and its intersection with cannabis cuisine.

High Tea is a terrific little book containing more than 75 recipes using an array of teas, herbs and aromatic ingredients. The hardcover edition features glossy photos of cannabis infusions of all kinds, from savory broths to herbal tisanes. Hinchcliff instructs the reader how to safely dose cannabinoids for a therapeutic and enjoyable experience, and explores the magical elements of

combining terpenes, THC and tea. There are recipes for creamy dessert teas like bhang as well, and readers can learn how to make their own hemp and coconut milk and brew their very own canna-chai.

The book's final chapter, "Cannabis-Infused Beverage and Sensitivity Cuisine Pairings," nicely ties everything together with recipes for brunch, lunch or anytime. "Sensitivity cuisine" is a term Hinchcliff coined to

describe a culinary practice that is free of the "big allergens" such as wheat, tree nuts, peanuts, soy or dairy. Hinchcliff suffers from life-threatening allergies and autoimmune disease, and she uses the soothing properties of cannabis to treat her immune system. Recipes are fresh, clean, healthy and delicious-sounding—Upside-Down Blood Orange Cake With Wild Blackberry Sauce, Spiced Hemp Banana Bread, Crispy Cajun Chicken and Fried Green Tomato Bites. *High Tea* offers sensational recipes for infused teas and sweet and savory bites that will make any tea party pop.

Mary Jane Gibson



HIGH TEA: GRACIOUS CANNABIS TEA-TIME RECIPES FOR EVERY OCCASION

Sandra Hinchcliff
(Skyhorse Publishing)

MUSIC RECOMMENDATIONS



SHILPA RAY
Door Girl
(Northern Spy)

Shilpa Ray is a wondrously unadorned singer-bellow who brings a plain-spoken toughness to her stories of the New York City she hints at loathing (but kinda loves a little bit). She views the seemingly inherent melancholia of NYC life with resigned good humor in "Shilpa Ray's

Got a Heart Full of Dirt," elsewhere wearing her guts on her sleeve by drenching "Manhattanoid Creepazoids" and "Morning Terrors Nights of Dread" in doo-woppy '50s rock'n'roll, echo-twang guitars and evocative chimes—moody wonders that evoke the dreaminess of Lou Reed's "Sunday Morning." *John Payne*



MOUNT KIMBLE
Love What Survives
(Warp)

The willfully obscure is the modus operandi on the third studio album from post-dubstep duo Mount Kimble. Like an anarcho-electro clash between the out-of-it post-punk of Joy Division and the clunky pre-techno of Cabaret Voltaire, "Four Years and One Day" and "Audition" combine the cheap-o e-drums of a

primitive video game with spider-tickle guitar aggro. The abstruse yet harmonious "Blue Train Lines" features anguished raps courtesy of King Krule; lumpy loops and vocalist James Blake strew "We Go Home Together" with more fittingly off-kilter sounds for our unsettled times. *JP*



MORBID ANGEL
Kingdoms Disdained
(Silver Lining Music)

It only took nearly seven years, a new lineup and the return of now three-time vocalist/bassist Steve Tucker, but revered extremists Morbid Angel have rediscovered death metal after 2011's industrial-influenced disaster *Illud Divinum Insanus*. Led by machine-gun riffs and deliriously warped guitar

solos, the rejuvenated band delivers a diabolical cavalcade of swarming blastbeats, guttural vocals and scorched-earth velocity on "Garden of Disdain" and "D.E.A.D." while cuts like "The Pillars Crumbling" and "Paradigms Warped" temper the merciless pace with churning mid-tempo grooves. *J. Bennett*



TY SEGALL
Freedom's Goblin
(Drag City)

LA song wizard Ty Segall's 10th solo studio album's 19-track eclecticism seems worthy enough to deem it his "White Album." The weirdly delightful "When Mommy Kills You" brushes up warmly against the sublime "My Lady's on Fire," which branches into an emotional jazz send-off. The knifing

chords of "She" are sure to be played live, while on the uplifting "I'm Free," when Ty declares, "I'm someone different, I'm free," you believe him. "And Goodnight" summons Neil Young with THC-laced twanging that transports you to the wildest horizon where ganja's goblin surely awaits. *Mark Miller*



TROPIDELIC
Heavy Is the Head
(Law Records)

Tropidelic's mix of hip-hop, reggae, metal and more will appeal to many music lovers—however, it's the band's lyrics that really stand out. Tropidelic's socio-political stances are not to be ignored, and their delivery is anything but cloying. Take the song "Dollar Saved"—it's anti-capitalist,

but not preachy, and the band winds in a spliff to boot: "Light a spliff and take a hit / Oppression is a mind-set it's time to just get over it / This a paradigm shift, this a blunt of fine shit..." The band just signed on to Law Records, and the stony, sunny platform suits their sound to a T. *Mary Otte*



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#CANNABISTOO

ADDRESSING SEXUAL HARASSMENT AND INEQUALITY IN THE CANNABIS INDUSTRY.

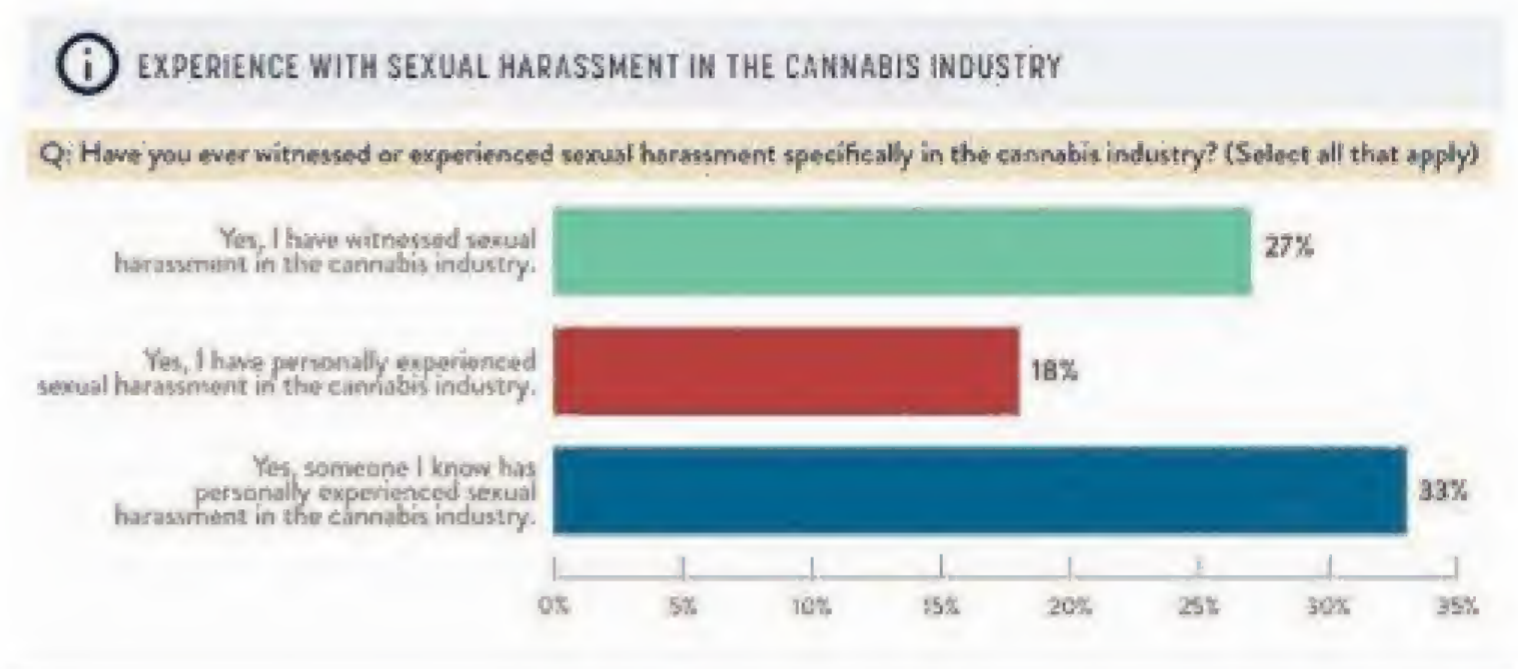
J.J. McCoy is Senior Managing Editor for New Frontier Data



LAST YEAR, NEW Frontier Data and Women Grow partnered to produce the cannabis industry's first industry-wide report about diversity within its ranks. The survey, 2017's "Diversity in Cannabis: Perspectives on Gender, Race, and Inclusion in Legal Cannabis," canvassed 1,741 self-selecting industry stakeholders across 29 states and Washington, DC. Respondents shared their respective experiences, shed light on the existing diversity throughout the legal cannabis industry and provided insight into the types of challenges faced by the burgeoning industry's growing workforce.

As conducted by two women-founded and -directed companies, the survey addressed the issue of sexual harassment. A year before the survey was administered, Fox News CEO Roger Ailes had been sued for harassment by network anchor Gretchen Carlson; shortly afterward, more allegations against Ailes were followed by complaints against Fox broadcaster Bill O'Reilly. A *New York Times* investigation revealed that, indeed, since 2002, five women had been paid settlements (one alone for \$32 million) from O'Reilly, Fox News or parent company 21st Century Fox. By the time the "Diversity in Cannabis" survey came out, media exposés seemed to detail incidents and accusations against powerful men almost daily—most notably involving Hollywood movie mogul Harvey Weinstein, against whom more than 50 women came forward publicly. Since then, heightened awareness and transparency led to the ousters of politicians (Al Franken), Hollywood stars (Kevin Spacey), journalists (Matt Lauer), and other celebrities or high-profile professionals across various industries.

Alas, the cannabis industry itself is not immune to the issue, and has seen allegations of its own. Results from our survey strongly suggest that the levels of women's involvement and responsibility through roles of industry leadership demonstrably make a difference. The



RESULTS FROM OUR SURVEY STRONGLY SUGGEST THAT THE LEVELS OF WOMEN'S INVOLVEMENT AND RESPONSIBILITY THROUGH ROLES OF INDUSTRY LEADERSHIP DEMONSTRABLY MAKE A DIFFERENCE.

cannabis industry shows high levels of gender diversity and opportunity (relative to other industries), and among the survey respondents' companies, women occupied positions of power and were included in positions across all levels of the organization. Women are making inroads into the cannabis industry at a rapid rate, raising their voices as lobbyists, entrepreneurs, tenured professionals and advocates and in many other roles. At the same time, we are learning that many of these women are faced with challenges we have seen time and again in other industries.

A 2017 poll conducted by the *Washington Post* and ABC News found that 64 percent of Americans felt that sexual harassment in the workplace was a serious problem. Meanwhile, in our study, sexual harassment was found to be a widespread issue in the cannabis industry with nearly half of respondents (45 percent) reporting that they had either witnessed it (27 percent) or had experienced it themselves (18 percent). An additional one-third (33 percent) reported knowing someone in the industry who had complained of being sexually harassed. When filtered to exclude responses from women working in ownership or management

positions (only those working as lower-level staff or interns), the percentage of respondents who reported witnessing sexual harassment jumped to 30 percent, and the number of those who know someone in the industry who had experienced sexual harassment jumped to 49 percent.

While the cannabis industry has proven to provide opportunities for women, it retains some key characteristics of a start-up industry in a nascent space. Key issues facing employees often include low pay, limited (if any) benefits, and spotty human-resources administration or training, as the industry is largely made up of small, privately held companies and individual corporate growth has been commonly constrained by federal prohibition of cannabis.

According to the "Diversity in Cannabis" report, 74 percent of survey respondents recognized a need for greater gender and racial diversity in the industry, but less than one-third of businesses had adopted workplace policies to ensure the recruitment and retention of a diverse workforce. To the extent that perceptions and practices can be more closely reconciled, the better off the industry at large will be as it matures. ✨

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

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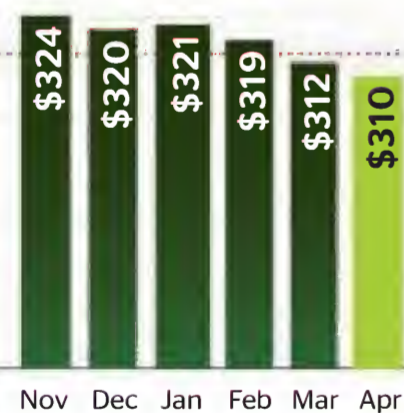
(Kali Mist)
"Unique, fluffy buds and an optimistic, elevating high."
-San Francisco, CA

MARKET ANALYSIS

Prices by the ounce

The US Price, Eastern and Southern indices all finished April down from their previous month's average. (The Eastern and Southern indices tend to be dominated by black market prices.) Meanwhile, the Western Index bounced back from its March average, finishing the month at \$260 an ounce. Gelato made the top five submitted strains for the first time in 2018.

US Price Index
YTD Average: \$316



Eastern Index
YTD Average: \$339



Southern Index
YTD Average: \$347



Western Index
YTD Average: \$261



(Cherry Diesel)
"Smells like fresh cherries, nice taste!"
-Bennington, VT

TRANS HIGH MARKET QUOTATIONS

STATE	CITY	STRAIN	PRICE
ALABAMA	Florence	Sour Diesel	\$420
ALASKA	Fairbanks	Tahoe OG	420
ARIZONA	Tempe Tucson	Platinum Cookies Jack Herer	225 270
ARKANSAS	Little Rock	Silver Haze	360
CALIFORNIA	Anaheim San Francisco	Pluto OG Kali Mist	330 300
COLORADO	Denver	Dark Star	200
DELAWARE	Newark	Silver Haze	430
FLORIDA	Gainesville	Girl Scout Cookies	420
HAWAII	Honolulu	Gelato	320
IDAHO	Boise	Trainwreck	300
ILLINOIS	Chicago Schaumburg	Critical+ Cookies	350 200
INDIANA	Bloomington	Blue Diesel	280
KENTUCKY	Burkesville	Critical Kush	330
LOUISIANA	Houma	Berry White	280
MARYLAND	Baltimore	Sour Diesel	280
MASSACHUSETTS	Boston	Sour Diesel	400
MICHIGAN	Detroit Lansing	Blue Dream Gelato	325 280
MINNESOTA	Bemidji	OG Kush	450
MISSISSIPPI	Brookhaven	Gas	280
MISSOURI	Joplin	Death Star	280
MONTANA	Billings	Blue Dream	200
NEBRASKA	Norfolk	Bruce Banner	280
NEVADA	Sparks	Blue Dream	230
NEW MEXICO	Carlsbad	Moby Dick	350
NEW JERSEY	Hoboken	Skywalker OG	420
NEW YORK	Brooklyn New York	Strawberry Cough Gorilla Glue	400 420
NORTH CAROLINA	Winston-Salem	Gas	320
OHIO	Akron	Purple Kush	300
OKLAHOMA	Edmond	Gorilla Glue	420
OREGON	Beaverton Bend	Purple Headband Berry White	130 200
PENNSYLVANIA	State College	Girl Scout Cookies	240
RHODE ISLAND	Portsmouth	Skywalker OG	280
TENNESSEE	Nashville	Hydro	360
TEXAS	Austin	Blue Dream	400
VERMONT	Bennington South Burlington	Cherry Diesel G-13	340 280
VIRGINIA	Norfolk	Blueberry	300
WASHINGTON	Seattle	Orange Kush	200
WISCONSIN	Madison Menasha	White Widow OG Kush	350 375
INTERNATIONAL			
AUSTRALIA	Sydney	White Widow	A\$300
GERMANY	Berlin	Northern Lights	\$350
CANADA	Toronto Vancouver	Alien OG Purple Kush	C\$260 200

High Times wants to know what you're smoking. Submit your strain information including location and price by the ounce to thmq@hightimes.com, or tweet us (#THMQ).

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-Nashville, TN

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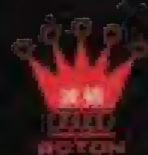
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THE **HIGH TIMES** PRO GUIDE TO

HARVEST

THE FINAL STAGES OF CANNABIS PRODUCTION REQUIRE PATIENCE, KNOWLEDGE AND THE RIGHT TOOLS FOR THE JOB. WE REVEAL THE KEYS TO PROPERLY DRY, CURE AND STORE YOUR HEAVY AND HEADY HARVEST. BY ERIK BIKSA

STING



Hanging branches to dry results in higher quality cannabis.



A wall of Sherbet colas drying at TKO Reserve in Oregon



Immature trichomes appear clear inside their bulbous heads.

YIELD SIGNS

Take two pot growers and give them both similar equipment and the same strains. Check back after harvest time, and you'll often see dramatically different results in the final quality of their buds and how they smoke.

While some of the differences may occur due to growing practices and management, much has to do with whether the buds were harvested at peak ripeness, and how they were handled, processed, dried, stored and cured.

Think of a properly ripened cannabis bud like a perfect moment in time—to be patiently waited for and worked toward, then finally captured and preserved. Any experienced toker knows that a well-ripened, -cured and -stored bud will smoke like a masterpiece over the same strain that's clumsily processed and winds up with qualities more like hay than distinctive cannabis.

WINDING DOWN THE CROP

Tasty buds begin with winding down the crop—rather than killing it on the spot when it comes to harvest time. After buds stop swelling and growing, there is still plenty going on, biologically speaking.

Cannabis plants will spend the final days of their life cycle transferring stored energy into swelling calyxes with a healthy matting of trichomes (the tiny hair-like structures found in abundance on female cannabis flowers).

Trichomes and the resin-filled gland heads they form are your key to identifying peak maturity to determine the optimal time to chop your crop. The process of winding your crop down to mature the buds should start 7-10 days before your anticipated harvest date.

CANNABIS MATURITY TRIGGERS

Lower day-night temperatures—ideally 75°F during light hours and 62-65°F during dark hours.

Maintain dry air in the growing environment, both during light and dark cycles, i.e., 40-45% RH (relative humidity).

Reduce or stop using nutrients or fertilizers, especially base fertilizers containing nitrogen.

Reducing light intensity can promote tighter buds in some strains at this stage, i.e., raise the lights a foot or use your dimmer function.

Increasing dark hours by decreasing light hours—i.e., 10 hours lights on, 14 hours lights off—can help speed up maturity.

Remove remaining large fan or water leaves from plants for firmer buds; this will reduce your trim time later too.

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IDENTIFYING PEAK MATURITY AND WHEN TO HARVEST

There's an old grower's adage: "Once you think your buds are ready, wait a week." While patience pays, it's also possible to let your buds go too long, resulting in a decline in quality. Harvest before senescence, the period after peak maturity when plants start to go downhill.

To capture quality at its finest, look inside the resin-gland heads on top of your trichomes at different heights on different plants in the garden. A magnifying glass works great—as does taking a clear close-up photo and zooming in on the screen for a closer look.

Look to see if the majority of the glands are milky-white and opaque. Less-mature glands will appear clear, and are often not as large. If they're past their peak, the oil inside will start to turn amber—before the head breaks off altogether.

A WELL-PLANNED ATTACK

As a small-scale hobby grower, you might be able to approach your harvest with some level of ease and relaxation—it's a rewarding time and it can be therapeutic. For larger harvests, you need the right tools and number of hands on deck to take down and dry your crop.

HARVEST FUNDAMENTALS

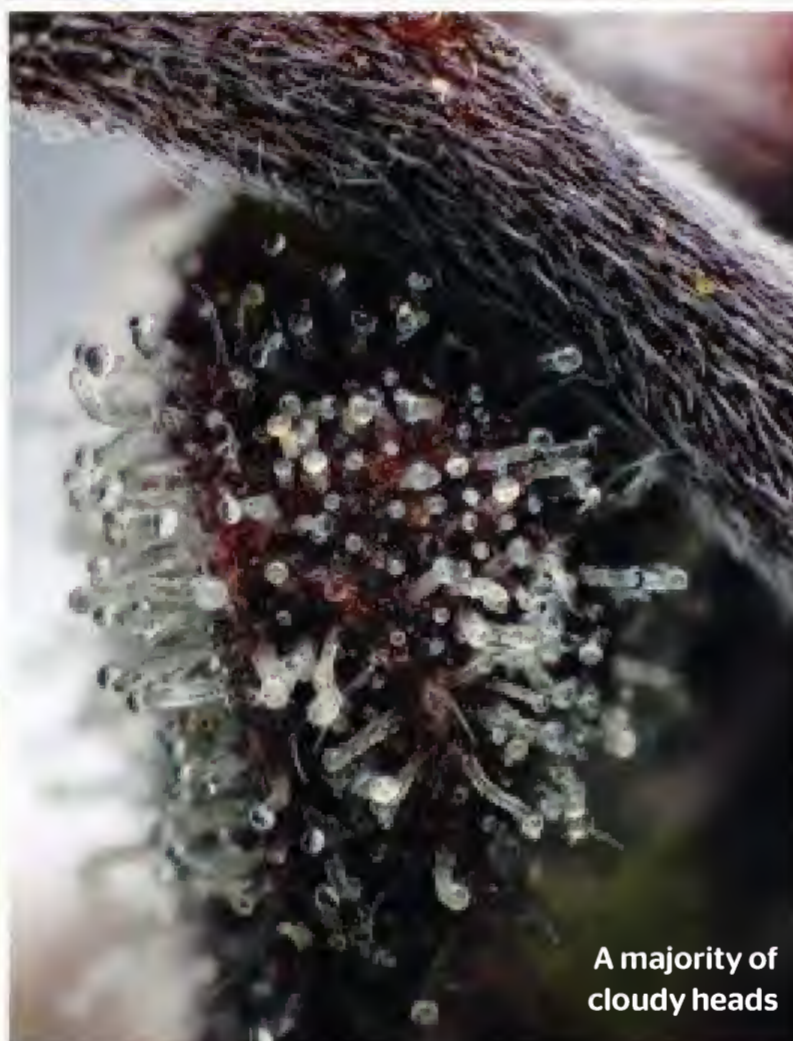
Five to 10 days before you expect to start cutting down buds, remove all the remaining large fan or water leaves.

During harvest, will you be hang-drying entire plants or branches, machine-trimming (fresh) buds individually, or hand-trimming for racks and/or hanging? Decide ahead of time, because it will influence your material-handling process and what you need on hand.

Ensure that your handling, trimming and drying areas are clean, sanitary, and free of obstructions or debris. You don't want to be running shop vacs after sticky buds are already hanging.

Make sure you have clean and sanitary bins or totes that are easy to handle. You'll need some for moving cut branches, capturing trim (small bud leaves are often worth keeping for processing) and handling trimmed buds. Tip: In a pinch, clear and tall 1020 propagation-tray domes make great handling bins.

The two trichome gland heads on the left are getting cloudy.



A majority of cloudy heads

HARVEST WHOLE, OR TRIM AS YOU GO?

There is no right or wrong way to trim buds—the final product is the benchmark of your growing and harvesting process. That said, how you trim will weigh heavily on final bud quality.

Once dried, the trichome stalks that support the bulbous glands become more brittle, so resins are lost more easily during handling and trimming. For this reason, it makes sense to do the bulk of the handling that is required while the plant material is fresh.

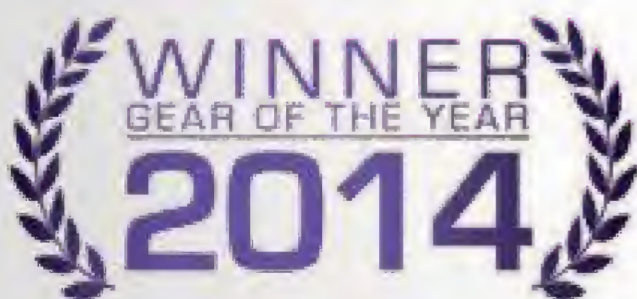
Harvesting branches is easier than lugging around entire plants. If machine-trimming fresh buds, the stems can be shucked of any remaining fan leaves before individual flowers are removed for the trimming machines. Alternatively, fresh branches can be hand-trimmed of any remaining fan leaves (making sure to collect any "sugar" leaves). Hand-trimmed branches can be hung to dry, or you can remove the buds for drying screens.



Drying racks at House of Cultivar in Seattle hold heavy plants.

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Thank you, High Times. Congratulations on your 500th issue!



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FRESH TIPS

Mature fresh-cut cannabis is very sticky. Make sure to wear gloves, keep your hair covered and avoid introducing debris from your clothing such as fibers or pet hair.

Handling freshly harvested buds will produce strong smells, so be prepared to manage the extra odor levels—and consider that they may be noticeable in places where air-purification equipment isn't installed.

Depending on your need for odor neutralization, you may do fine with some good masking agents or odor neutralizers distributed along the outside perimeter of your area. Activated-carbon filters with fans set to scrub the air perform well at keeping industrial-size smells under control.

Chopping down this much biomass with almost 80% water content is going to release a lot of moisture into the surrounding atmosphere very quickly. Dehumidifiers can prevent things from getting too swampy while also creating a better environment to dry the flowers into tantalizing crystallized nuggets. For smaller-size hobby crops, the extra moisture in the air should dissipate quickly enough on its own.

Nose tip: Activated-carbon filters perform poorly at capturing odors in moist air, so keeping the air drier during harvest offers several benefits.



Trimming machines power through large harvests quickly.



A worker hand-trimming flowers with precision

MACHINE VS. HAND TRIMMING

Luckily for the modern cannabis grower, there is a wide selection of bud-trimming machines available to choose from. Trimming can be very tedious and labor-intensive—some trim jobs may be too big to do manually, even with a lot of people on hand. Machine trimmers can be big time-savers and, in some instances, can even improve the look of smaller buds compared with those that were hand-trimmed.

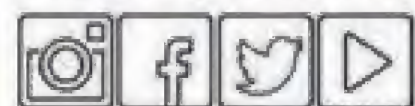
All trimming machines are going to knock off some of the resin—on average of up to 10% of your total resin content. However, that resin is often well captured by the trimming-machine system, so it can be used for processing into hash.

TRIMMING WET VS. DRY

As the number of companies that offer “dry trim” machines increases, so does the debate as to what is best: trimming the buds fresh or dry. There's good logic on both sides of that coin. However, the fact remains that trichomes become more brittle after drying, so it may be best to do most of the handling and trimming when the plant material is fresh, before the drying stage begins.



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THE DRYING PROCESS

If you don't do this right, you can seriously damage the aroma, flavor and smoothness of your final bud quality. Don't be hasty—patience pays in the drying process.

Consider that your final air-dried weight will be around 20% of your fresh harvest weight. Your buds need to lose a lot of moisture before they're ready for the next step in the harvest process, the curing stage.

If you dry your buds too quickly—for example, in just a day or two in very hot and dry air—they'll likely lose their aroma and flavor and wind up smelling like hay. Furthermore, when buds are dried too quickly, they often wind up smoking harsh and not burning properly. Smooth-toking and high-quality dried flowers aren't rushed.

Conversely, wet plant material needs sufficient air exchange and moisture loss to

prevent harvest diseases like rot or mildew. Ideally, in the first 24 hours after being chopped and trimmed, buds can be coaxed into losing a high percentage of their original water content, after which the rate of drying and water loss is slowed for the remainder of the process. This will keep quality high while reducing the chances for diseases that thrive in moist plant material.

You don't want buds drying in air warmer than 85°F or cooler than 65°F, with an ideal humidity range of 30-45%.

Buds are considered to be dry and ready for the next step, curing, once the stems break rather than fold over. Usually this occurs 5-8 days after cutting plants down and drying. Be careful how you handle the buds, especially after they've dried—rough handling can reduce your final quality and resin content.

Tip: Don't rush to put dried buds into plastic bags or storage containers—just because the flowers feel dry after a few days doesn't mean they are! Once in plastic, moisture that was inside the bud will "sweat" its way out too fast—leading to mold or undesirable aromas and flavors.

Never put your buds directly in front of a hot-air source like a heater or dehumidifier, and never use the oven or microwave to dry them.

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Curing is an important biological process that brings out your flowers' best qualities. After air-drying, closed containers are used to wick out the remaining moisture from inside the stem to the outer surface of the flowers.

After gently placing your flowers into jars or bins, avoiding compaction, seal the lids for just a few hours. You'll find that the flowers at the bottom will feel moist again. Gently rearrange the buds so that the contents from the bottom are now on top, and repeat this process until the buds no longer feel moist after the jar is closed for a day at a time.

Indica strains tend to mature and decline quickly when it comes to quality and short-term storage conditions. *Sativas* will often improve after several months and hold their kick for longer, given the same storage conditions versus *indica*-dominant strains.

Factors that will degrade stored buds more quickly include exposure to light, temperature fluctuations, exposure to air and, of course, if they were not dried and cured properly to begin with.

Glass mason jars are still great for keeping buds at their peak if kept out of light and maintained at or under 65°F. Turkey and Foodsaver bags are superior to regular food-storage bags, which do little to protect weed quality.



Wealth on a shelf! Perfectly dried and cured buds

Cannabis aficionados may seek out specialty bud humidors or specialty storage containers and/or bags that can regulate the internal humidity of your stash.

For long-term storage, airtight locking containers blasted with nitrogen gas or CO₂ can preserve that picture-perfect moment at which you captured your cannabis crop. ✨

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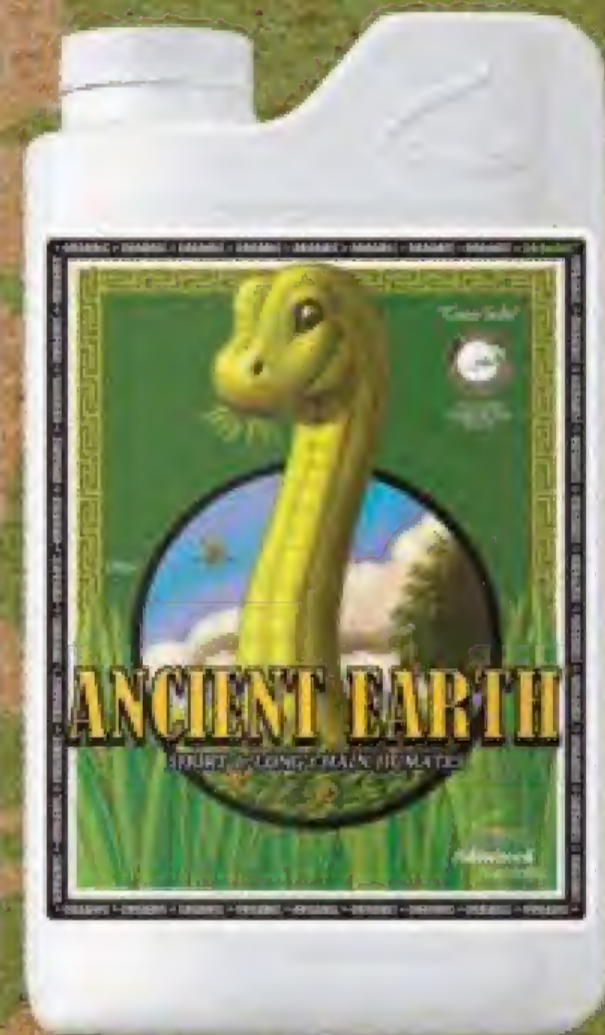


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DRIVING HIGH

AS MORE AND MORE STATES LEGALIZE CANNABIS FOR RECREATIONAL USE, AUTHORITIES ARE ATTEMPTING TO ESTABLISH AND ENFORCE STANDARDIZED STONED-DRIVING LAWS. WHILE EXPERTS AGREE THAT STONED DRIVING CANNOT BE REGULATED IN THE SAME WAY AS DRUNK DRIVING, THE QUESTION REMAINS: CAN LEGISLATORS AND LAW ENFORCEMENT MEET THE UNIQUE CHALLENGES PRESENTED BY CANNABIS CONSUMPTION BEHIND THE WHEEL?

BY JOEL WARNER

EVERY FEW WEEKS, Chris Halsor has volunteers in Colorado take part in a scenario that at first blush seems too good to be true. He transports them, free of charge, to a respectable hotel where, in a comfy, goody-filled RV in the parking lot, he has them get really high.

There's only one rub: After they're nice and stoned, they're escorted to a hotel conference room filled with prosecutors and cops.

For the next several hours, the volunteers are probed, prodded and analyzed by the very people cannabis users usually try to avoid at all costs. The goal is improved public safety. Halsor,

expanded his services to California).

"It's a big paradigm shift of law enforcement and prosecutors to adjust to some of these changes," Halsor says. "The idea behind it was to help law-enforcement officers improve their ability to detect and investigate marijuana-impaired driving cases."

After several years of running the program, Halsor knows more about cannabis impairment and driving than nearly anybody. And what he's learned has caused him to reevaluate his stance on laws that base cannabis impairment (and driving-under-the-influence charges) on specific THC levels in a person's body, similar to how alcohol inebriation is

agree on is that people who are too high to drive should be kept off the road. But as lawmakers pass new rules about driving while high and tech companies rush to perfect cannabis breathalyzers, such efforts are coming into direct conflict with a growing body of evidence that suggests when it comes to cannabis and driving, there's a lot we still don't know. So, if the old tests and approaches won't work, how are we ever going to know which cannabis users should be behind the wheel and which definitely shouldn't?

When marijuana was still illegal from coast to coast, cases involving marijuana and driving were relatively straightforward: If you were caught with any amount of marijuana in your system while on the road, you were likely going to be in trouble. "For a long time, cannabis was an afterthought in the world of driving-under-the-influence lawmaking," says Alex Kreit, a marijuana-law expert and director of the Center for Law and Social Justice at the Thomas Jefferson School of Law. "For a long time, there was a push to standardize blood-alcohol laws, and there wasn't much attention on substances other than alcohol."

But as states started legalizing medical and recreational cannabis use, lawmakers had to determine how much marijuana use is too much when you're behind the wheel. Borrowing from the idea that cannabis should be regulated like alcohol, many of these officials looked to the laws and tests that have long been used to identify drunk drivers. In other words, they began basing cannabis inebriation on the amount of cannabis found in the body.

Four states—Colorado, Illinois, Montana and Washington—have passed laws decreeing that anyone caught on the road with five nanograms or more of THC per milliliter of blood is considered to be driving under the influence of cannabis. Two other states—Nevada and Ohio—set the limit at two nanograms per milliliter of blood. All of these states save one have so-called "per se" rules, meaning if you're caught on the road while over the blood-level limit, you're considered guilty of drugged driving. Colorado, however, passed a "permissible inference" version of the law, meaning if you're caught driving while over the five-nanogram limit you're presumed to be guilty, but you're allowed to argue in court that you weren't actually impaired.

Experts believe that as cannabis prohibitions continue to wane, other states



WHEN MARIJUANA WAS STILL ILLEGAL FROM COAST TO COAST, CASES INVOLVING MARIJUANA AND DRIVING WERE RELATIVELY STRAIGHTFORWARD: IF YOU WERE CAUGHT WITH ANY AMOUNT OF MARIJUANA IN YOUR SYSTEM WHILE ON THE ROAD, YOU WERE LIKELY GOING TO BE IN TROUBLE.

a Colorado attorney and former public prosecutor, is the founder of Green Lab, a first-of-its-kind endeavor that allows law-enforcement personnel and others to learn about cannabis impairment by witnessing it, up close and personal. Modeled on "wet labs," the longtime training scenarios in which cops observe drunk people to better understand alcohol inebriation, Halsor designed the program to help police officers correctly identify people who are too high to be on the road, especially in states where cannabis laws are shifting (Halsor recently

based on blood-alcohol levels. He used to support such rules, which are being implemented in a growing number of states around the country. Now he's changed his tune.

"We are used to a [blood-alcohol] number," Halsor says. "A number like that for cannabis would make it all gel together. But I wouldn't advocate for new states coming on board to adopt such an approach. I don't know if it really serves what we thought it was going to serve."

One of the few things law enforcement and cannabis advocates tend to



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will likely follow a similar tack. “As more and more voters are showing their tolerance for state-legal marijuana, legislators aren’t necessarily going to be up to speed on the issue and are going to copy what states like Colorado and Washington have done,” says Skyler McKinley, director of public relations and government affairs at AAA Colorado. “They are going to get these laws on the books as part of these big packages of legislation.”

That means a growing number of states will likely end up with nice, tidy rules on which to base cannabis-and-driving cases. There’s only one problem: Scientifically, everyone agrees these rules don’t make much sense.

For starters, unlike these new cannabis traffic-safety laws, blood-alcohol limits for driving weren’t hashed out over legislative bargaining tables. They were carefully determined through extensive and meticulous car-crash studies in the late 1960s overseen by the country’s first traffic czar, William Haddon Jr., a trained epidemiologist. The result was a pioneering set of laws based on science, not politics.

Alcohol was uniquely suitable to regulations and tests based on biological indicators, such as blood-alcohol concentrations and alcohol levels on a subject’s breath. That’s because unlike the vast majority of drugs, the relationship between alcohol levels in the body and alcohol intoxication remain markedly constant from one person to the next.

“Alcohol is conveniently emitted through your breath in amounts that correctly predict intoxication and impairment. That is not the case with most drugs,” says Ryan Vandrey, an associate professor at Johns Hopkins University School of Medicine who studies the behavioral pharmacology of cannabis. “People often say, ‘We have a breathalyzer for alcohol, why don’t we have one for cannabis?’ Well, we don’t have



A GROWING NUMBER OF STATES WILL LIKELY END UP WITH NICE, TIDY RULES ON WHICH TO BASE CANNABIS-AND-DRIVING CASES. THERE’S ONLY ONE PROBLEM: SCIENTIFICALLY, EVERYONE AGREES THESE RULES DON’T MAKE MUCH SENSE.

a breathalyzer for any of the hundreds of other things that can impair your driving.”

Cannabis impairment, on the other hand, doesn’t seem to track consistently with THC levels in a subject’s system at all. Intoxicating effects can vary widely depending on the method of consumption, and longtime marijuana users tend to build up a tolerance to its performance-impairing effects. In other words, it’s possible that a first-time cannabis user could be in no shape to drive with less than five nanograms of THC per milliliter of his blood, while a regular cannabis consumer could have far more than that level long after all the intoxicating effects of her last smoke session have worn off.

To get to the bottom of the matter, in

2015 the AAA Foundation for Traffic Safety commissioned a study to determine whether there was any correlation between blood concentrations of THC and driver impairment and crash risk. The study results were decisive, says lead author Barry Logan, chief of forensic toxicology at Pennsylvania-based NMS Labs and a leading figure in drug-impaired-driving research. “Our conclusion was you are not going to find a blood concentration level for cannabis that is a useful tool for deciding whether someone is under the influence or not,” says Logan. “You can’t really say anything based on the number.”

Thanks to findings like that, both the American Automobile Association and the National Safety Council now recommend against states basing cannabis and driving laws on cannabis-blood-concentration levels. Even the National Highway Traffic and Safety Administration has conceded in past reports that “It is difficult to establish a relationship between a person’s THC blood or plasma concentration and performance impairing effects.”

It’s possible, however, that researchers will eventually find a reliable way to

draw a parallel between impairment and evidence of cannabis in the body. Vandrey, for example, is working on a new study that will scrutinize a variety of biological markers to see if any correlate consistently with impairment. But even if scientists do hit upon a way to gauge cannabis intoxication through something like a blood test, there’s another problem. “THC drops precipitously after somebody stops using cannabis,” says Logan. “THC levels fall by about half in 20 minutes, and in about an hour it’s about 20 percent of what it was originally. So in the real world, by the time someone is pulled over, given a roadside sobriety test, then brought to a hospital and had blood drawn, that number won’t tell you anything about the number they had when they were driving.”



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It's why the race is on to develop a cannabis breathalyzer that officers can use as soon as they pull somebody over. And there are indications that such devices could soon hit the streets. One of the big challenges for marijuana breathalyzers is tied to the vapor pressure of cannabis, which is an indication of its evaporation rate. Ethyl alcohol has a high vapor pressure, meaning its molecules are constantly escaping into the air—which is why the smell of alcohol is so pungent and it's fairly easy to measure the substance on someone's breath. On the other hand, THC's large and complex molecules have such a low

The fact that we're still learning about THC's fundamental physical properties is only one of the reasons why companies working to develop breathalyzers have been laboring for years without anything promising yet hitting the market. "THC exists in your breath in parts per trillion. You compare that with alcohol, which is in the parts per thousand. You have to be a billion times more exacting," says Mike Lynn, CEO of Hound Labs, one of the main firms working on the challenge. "It's like looking for a few specific drops of water in a hundred swimming pools put together. We had to figure out some pretty clever ways to identify the THC in

if you can measure THC in your breath, it is absolutely in your bloodstream," says Lynn. "But you can't see how much is in your blood. It's one of the reasons it's been so unfair to have these blood standards. They don't correlate to any sense of impairment."

The good news is that even if driving laws based on cannabis-blood levels aren't effective, marijuana legalization hasn't led to a spike in cannabis-fueled car accidents. In both Washington and Colorado, for example, government officials note traffic safety hasn't been negatively impacted by the states' new recreational-cannabis markets. Reports like this lead Paul Armentano, deputy director of the National Organization for the Reform of Marijuana Laws, to call these new cannabis-driving laws "a solution in search of a problem." After all, Armentano points out, "The bottom line is driving under the influence of marijuana or any intoxicating substance is already a traffic-safety violation in all 50 states."

It's why many policy experts recommend that instead of passing unnecessary and scientifically dubious new laws about cannabis and driving, lawmakers should instead be making sure police officers are correctly trained to recognize the physical signs of impairment when they pull someone over, no matter what substance caused the impairment or what might be found in a blood test. "If I am a policymaker, I would avoid these THC blood limits at all cost," says McKinley at AAA Colorado. "The wise choice in public policy is to have dedicated funding that creates training programs for drug-recognition experts, which are the peak law-enforcement officers trained to recognize drug impairment."

Halsor thinks his Green Lab program is a practical alternative to unwieldy and unrealistic new cannabis-driving laws. Not only are his sessions helping law-enforcement personnel understand when they should bust someone for cannabis impairment and when they shouldn't, but the events are also breaking down social barriers. "When we first started, we hoped that by putting police officers and cannabis users in the same room, they might learn from each other," Halsor says. "We didn't know that was going to happen, but fortunately it did. In the absolute majority of cases, both Green Lab volunteers and police officers have walked away thinking they have a little better understanding of each other." ✨



THE RACE IS ON TO DEVELOP A CANNABIS BREATHALYZER THAT OFFICERS CAN USE AS SOON AS THEY PULL SOMEBODY OVER. AND THERE ARE INDICATIONS THAT SUCH DEVICES COULD SOON HIT THE STREETS.

evaporation rate its vapor pressure had never been accurately measured, until scientists at the National Institute of Standards and Technology laboratory in Boulder, CO, used a pioneering technique to do so earlier this year. The discovery could be used to develop and calibrate future breathalyzers. "One application of the vapor pressure of THC would be to help calculate the level of THC you collect on someone's breath and correlate it back to the THC concentration in his or her blood," says Tara Lovestead, a NIST chemical engineer and the lead author of the study.

such vanishingly low concentrations."

Lynn insists his company has figured out a way to do so, however. He says the resulting Hound breathalyzer is in the final stages of testing and will launch in 2018 with a retail price between \$500 and \$1,000, similar to alcohol breathalyzers. But he's quick to note that while his device will detect THC on someone's breath, indicating he or she recently consumed the drug, its measurements say nothing about cannabis-blood concentrations—one more indication that driving laws based on cannabis-blood levels don't make any sense. "All you can say is

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SEATTLE'S HOUSE OF CULTIVAR

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BY DANNY DANKO.

Plants thrive in one of the flowering rooms at House of Cultivar.





Golden Gage flowers growing through the trellis.



Each flowering room is lit with 90 grow-lights.



Mindscape turns purple approaching maturity.

THE CITY OF FLOWERS

Common wisdom in the cannabis-cultivation community has it that as growers scale up the size of their grow space, the quality of their product inevitably suffers. Indeed, it is quite difficult to produce A-grade flowers in a massive warehouse, but it certainly can be done.

Consider House of Cultivar, the largest marijuana-production facility in greater Seattle, at 40,000 square feet with the capacity for 852 flowering lights. Even with all of that space to manage, the expert horticulture team at Cultivar produces many pounds of connoisseur-quality flowers and top-shelf concentrates. Part of the company's motto includes the statement "To do right by this plant—seed, root, flower and leaf—every step of the way," and Cultivar's clearly devoted to maintaining integrity and best practices throughout the process.

CEO and founder Jason Hutto explains that he and his staff are committed to growing great strains the right way—without pesticides, watered and trimmed by hand, and slowly cured to perfection. So much so that House of Cultivar recently won best indoor grow in Washington State at the 2017 Dope Awards. Cultivar's commitment to excellence and genetic diversity differentiates it from many others, proving that craft-quality cannabis can be produced on a large scale.

Located in the heart of Seattle, in a previously derelict shipping facility in the SoDo neighborhood, House of Cultivar holds a Tier III indoor-production/processing state license. The company also maintains a strong focus on sustainability and lowering its carbon footprint. When it comes to lighting, water and waste, the House of Cultivar team is always looking for ways to diminish its impact on the environment. The company has even worked with the city to reduce its electrical load by 46 percent off baseline.

PASSION FOR STRAINS

Another aspect that sets House of Cultivar apart is the team's commitment to growing and stocking a wide variety of different strains. Between its mother-plant library and its tissue-culture laboratory, Cultivar possesses over 350 unique live genetic specimens. The company's large stock of seeds comes almost entirely directly from the original breeders. The list of varieties that it grows is staggering, far too many to print here, but suffice it to say that it is vast and filled with gems including OGs, Cookies, Diesels, Chems, Lemons and Sherbets.

These aren't watered-down versions of these varieties either. The crew that hunted these genetics down did their due diligence, because each and every one of the varieties represents the unique and robust terpene profile that matches its name. Whether it's something gassy, fruity or earthy, the strains grown at House of Cultivar are the perfect rendition of their potential. Cultivar's Chem Mint Cookies and Super Glue are two of the most fragrant, potent and amazing varieties I've ever sampled.

In particular, House of Cultivar prides itself on its archive of Chem Dog family strains—Chem D, Chem 91, Guava, Snowdog and many more—and the Cultivar staff has searched for the phenos that test high in THC and have the most essential-oil production. As a longtime Chem-strain fan, I was impressed by the quality and quantity of Cultivar's archive.

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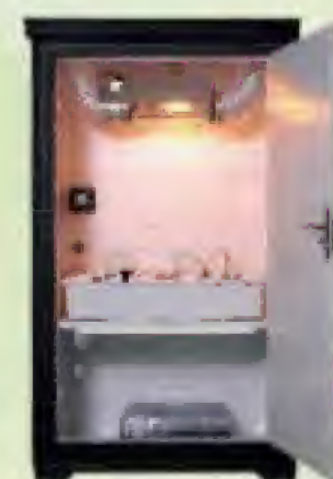
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TISSUE-CULTURE LAB

Although it still employs traditional cloning techniques, House of Cultivar also maintains a completely sterile tissue-culture laboratory in order to preserve, improve and micropropagate its vast library of genetics. The facility has a magnetic locking-door system to avoid cross-contamination and state-of-the-art equipment for clean regeneration practices. House of Cultivar's director of lab operations, Mike Hydro, gives me a guided tour and explains exactly what he and his team are looking to accomplish by using tissue-culture technology.

Think of tissue culture as cloning, but on the cellular level. A tiny fragment of an emerging node, a callus the size of a pinhead, is carefully cut from a plant and then suspended in agar inside a test tube. These disease-free plantlets can then be used for a variety of purposes depending on the needs of the laboratory.

The benefits of utilizing tissue-culture techniques include ridding plant stock of pests, diseases and pathogens. Mold- or insect-damaged genetic material that would normally have to be discarded can be cleansed and restored to its true original and robust potential. Topical issues such as pest damage can be handled in one generation while bacterial and fungal issues may take multiple generations of micropropagation to mitigate. In this way, House of Cultivar's genetics can be preserved in vitro and stored for many years in its cryogenic freezer and even improved upon over time.

Another advantage of micropropagation

is for rapid multiplication of plants. One healthy mother plant can produce thousands of explants, which are then coaxed into rooted cuttings ready for the vegetative stage of growth. Conventional cloning produces just a fraction of these amounts. I've seen tissue-culture labs in action all over the world, but this was the first time I've witnessed commercial cannabis production using micropropagated plants. Watching the team at House of Cultivar put this cutting-edge technology into practice gave me a glimpse into the future of cannabis cultivation.

GROWING CULTIVARS

The cultivation chambers at House of Cultivar are climate-controlled using a full dew-point-managed HVAC system with HEPA filtration and advanced biocontrol. Flowering plants are lit with a combination of multi-spectrum ceramic metal halide (CMH) lighting and double-ended high-pressure sodium (HPS) fixtures. The use of the CMH systems reduces energy consumption by over 50 percent!

The plants, grown in a blend of RHP-certified organic Cloud Coir coco and perlite, clearly love the mixed-spectrum lighting. They glisten with swollen glandular trichomes whose bulbous heads are filled with the essential oils. These terpenes, cannabinoids and flavinoids are what give the stellar strains their aromas, flavors and effects. Whether growing for flower or concentrate production, the proper preservation of these pungent and potent organic compounds is what

separates the best from the rest.

The vegetative and flowering areas are in opposite areas of the complex to ensure that their environmental conditions are optimal for each individual stage of plant life. Water passes through multiple filtration treatments including RO (reverse osmosis). Facility architect and vice president of operations Matthew Gaboury takes me through the various parts of the House of Cultivar complex and explains how it all works together to produce high-quality cannabis and concentrates.

The eight 90-light flowering rooms are staggered at two weeks apart, allowing House of Cultivar to harvest perpetually. This ensures that a fresh product reaches the marketplace in a regular and timely fashion. The rooms are filled with plant beds on rolling trays. Plants in coco cubes sit on top of the coco-perlite mix, eliminating the need for individual plastic pots and reducing water waste due to runoff by over 20 percent.

PEST CONTROL

Washington State cannabis regulations don't allow growers to use pesticides of any kind. House of Cultivar uses a system of OMRI-certified organic IMP (integrated pest management) consisting of only biological controls including predator mites, nematodes and beneficial fungi that outcompete powdery mildew (PM) in the root zone. The predatory mites attack the larvae of fungus gnats, thrips and root aphids as well as full-grown broad, spider and russet mites.

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Examining a drying bud



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HARVEST

All plants are flushed for 10-12 days from harvest with only plain water and natural enzymes. Plants are hung to dry whole and intact to preserve the “nose” of the flowers. Drying takes place in hermetically sealed chambers with antimicrobial wallboard and their own HVAC system to dial in environmental controls. At the perfect temperature and humidity levels, terpene preservation is at the maximum.

Leaves are left on the plant during the drying process to protect the fragile trichome glands. Humidity is kept at 56-60 percent to slow the process. The flowers then undergo a dry trim. No machines are used. All of the colas are hand-trimmed with scissors by a crew before being placed into containers to cure. Drying takes place for two weeks and curing takes one to two weeks minimum. At the moment, Cultivar is pulling approximately 75-85 pounds of dry flowers per room.

PRODUCTS AND PACKAGING

Only the premium nugs go into flower packages. Trim and smaller buds are saved for processing into extracts and Goldfinger pre-rolls, which are infused-flower joints painted with a sticky distillate/terpene-honey mix and then rolled in dry-sifted trichome glands. This results in a dipped and dusted slow-burning, flavorful spliff that can get a whole roomful of smokers quite high. They're currently available in five different flavors with more soon to come.

House of Cultivar's vice president and head of processing, Alex Parisi, shows me a few of the company's processing and extraction capabilities. Cultivar works in collaboration with the State's premium hydrocarbon extractors who process hydrocarbon extractions for distillates and strain-specific CO₂ vape carts using an Eden 20-liter CO₂ machine. A hydraulic press also provides award-winning rosin squeezed from flowers and dry sift. House of Cultivar has become known throughout Washington for its flavorful and potent concentrates.

Ultimately, I learned that the crew at House of Cultivar are true connoisseurs. As aficionado-level cannabis consumers themselves, they want the best pot products they can find. As committed cultivators, they've adapted to the challenges of growing big. What they showed me confirms that growers in larger spaces don't have to sacrifice quality, as long as they emphasize strain selection, proper growing techniques and a passion for the plant, from seed to sale. 🌿

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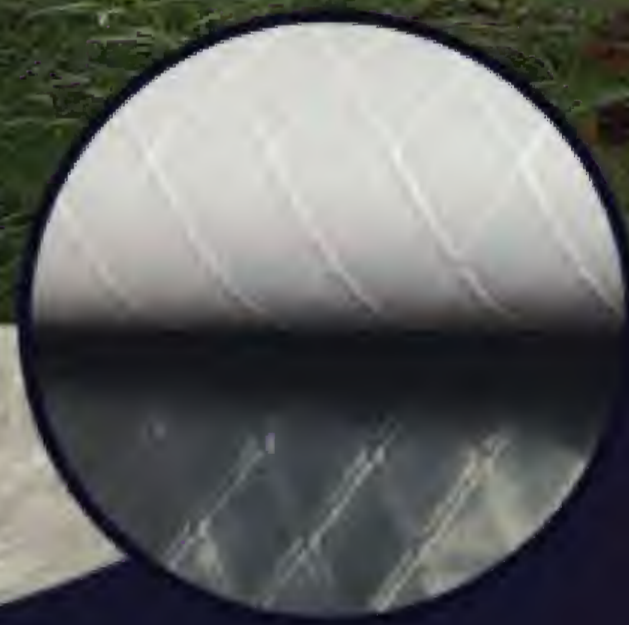
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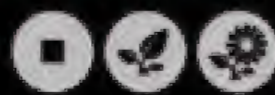
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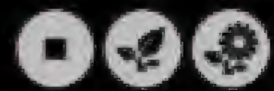


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CONCENTRATED CANNABIS

PART III: LOOKING BEYOND THE SMOKE

BY SEAN BLACK

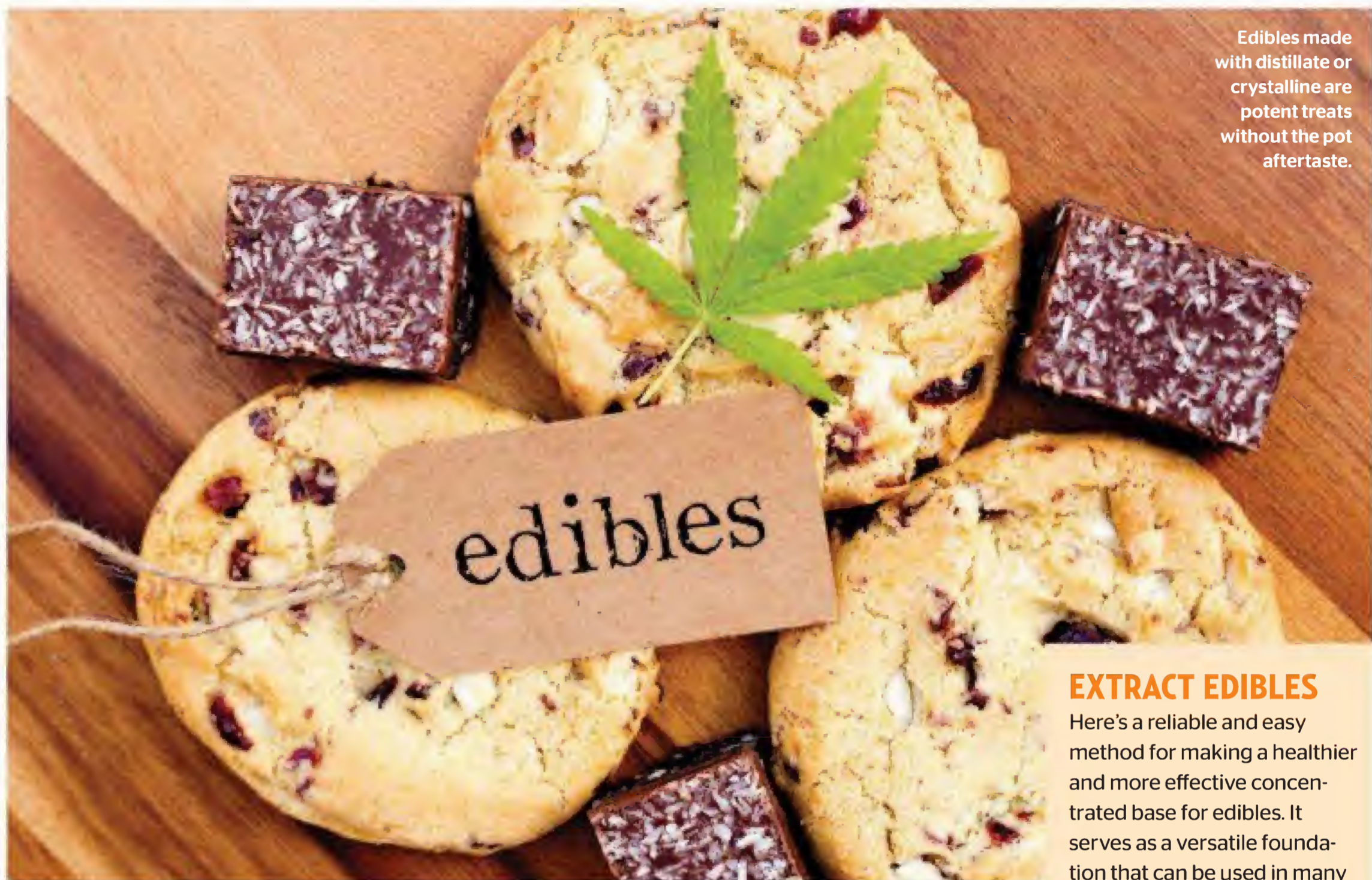
WELCOME TO PART III of our “Concentrated Cannabis” series. In our first installment, we examined the history of concentrates as well as the different types of extracts and how they are produced. In Part II, we discussed the latest techniques for extraction and how concentrates affect the body and mind. Now, in the latest installment of the series, we examine the benefits of cannabis concentrates that are not smoked or vaped.

By now, most readers are aware of how cannabis concentrates are consumed—and are familiar with the ensuing sense of euphoria and well-being. Whether dabbed on a nail, sprinkled on top of a bowl of flowers or vaped in an e-pen, there’s nothing quite like exhaling the smoke from a tasty, terp-filled dab. Thanks to different combinations of terpenes (the essential oils lending cannabis its various aromas and flavors) and cannabinoids, extractions of different strains can be used to achieve an array of psychoactive results. Consumers find that certain strains bring about feelings of creativity, motivation, energy, relaxation, pain reduction and appetite stimulation.

The truth is that dabs and different types of hash are just the tip of the iceberg for concentrates. There’s a whole world of applications for cannabis extracts that don’t require smoking or dabbing. These concentrates are being used to treat a number of illnesses and have proven instrumental in improving quality of life for countless patients—and, in many cases, saving lives.



Capsules of concentrated cannabis allow for more consistent and potent dosages.



Edibles made with distillate or crystalline are potent treats without the pot aftertaste.

EDIBLES

While concentrates have become a major part of the marijuana marketplace over the past few years, they have also been instrumental in the extraordinary evolution of edibles. As the edibles industry has made incredible strides, the days of pot brownies filled with chewy mouthfuls of flower and ripe with the strong taste of cannabis are long past. Previously, most edibles were relegated to the ranks of sugary, candy-like products. But with today's more refined consumers, the common medicated Rice Krispies treat no longer suffices. Consider progressive products like Om Edibles' vegan, gluten-free and paleo-friendly cinnamon-maple Treehugger clusters, or the spiced apple cider from Ganja Grindz and the Clear, or Tahoe Herbal Company's Kannabucha, a fermented probiotic tea. These are just a few examples of out-of-the-box creations entered in past Cannabis Cups that highlight how concentrated cannabis has elevated the edibles game. But how do these companies do it?

Traditionally, cannabutter was the most widely used base in edibles. Created by slowly simmering your flowers in butter to decarboxylate THC-A into its coveted, psychoactive form of THC, you get a potent batch of medicated butter that can be used to make almost anything. Unfortunately, this also results in a product that usually carries a strong aftertaste of cannabis flowers, making it less appealing to the palate for many.

However, by using distillate or crystalline—nearly pure THC-A devoid of any terpenes or chlorophyll found in flowers—edibles makers can achieve the psychoactive effect of our favorite plant without the unpleasant taste.* While terpenes are an important part of the experience when smoking or vaporizing, they play no real role in edibles. THC enters the stomach and then the liver, which converts the THC into 11-hydroxy-THC, which is also highly psychoactive. This is why the experience of eating cannabis is profoundly different than smoking it, as it literally becomes a different drug. Contrary to what some companies advertise, whether the edibles are made from *sativa* or *indica* makes no real difference in the experience of the high when consuming them.

The lack of terpenes and chlorophyll in distillate or crystalline allows the other ingredients in edibles to come to the forefront and eliminates the need to find ways to mask the cannabis aftertaste. Along with the use of such extracts, edibles makers are also moving away from butter, using healthier fats. Using an ingredient high in fat, like coconut oil or avocado oil, gives THC something to bind to and increases its bioavailability. This allows the consumer to get more from their medicine.

In addition to improving flavor, distillate and crystalline assist in the accuracy and potency of edibles dosing. Using extracts that are nearly 100 percent THC allows the maker to create edibles that have a more consistent dosage.

EXTRACT EDIBLES

Here's a reliable and easy method for making a healthier and more effective concentrated base for edibles. It serves as a versatile foundation that can be used in many ways. Instead of using a cup of ground cannabis, use 2-3 grams of distillate. Place in the oven at 220°F for 60-90 minutes in a container (oven-safe silicone works perfectly), allowing the material to decarboxylate. Next, combine the distillate with one cup of organic coconut oil. Slowly heat over a double boiler or in a slow cooker, making sure to keep the temperature well below 245°F, as higher temps can cook off valuable cannabinoids and degrade potency. Let the mixture simmer slowly for another 30 minutes, stirring occasionally. When cooled to room temperature, the coconut oil will solidify. You are now left with a potent, healthy base ready to accompany whatever dish you choose to create—from a medicated hollandaise sauce to a delicious shrimp scampi. To take things a step further, you can use crystalline THC, which will remove any trace of the taste of cannabis, allowing you to incorporate THC in the highest high cuisine.

JUICY J GLASS

Juicy J Glass specializes in the use of gold and diamonds in glass waterpipes to create works of art that appreciate in value.



" I'm happy to present my new glass pieces to all my stoners. This is such a accomplishment for me and I'm happy that I can share something of quality with everyone. " - Juicy J

Handwritten signature of Juicy J in white ink.



CAPSULES AND TINCTURES

For some people, THC-infused edibles are not a useful way to ingest their medicine, especially if they are following a regimen that requires them to consume throughout the day to maintain a specific dosage (who wants to be scarfing down Rice Krispies treats six times a day?). For these patients, capsules are a very effective alternative. By simply adding a teaspoon of soy/sunflower lecithin to your THC base and then using an oral syringe to fill gel caps once its cooled off, you have a powerful and portable medication that can be easily replicated.

Tinctures are also very valuable for those seeking ease of use with their concentrated cannabis. The medicinal effects of tinctures take less time to kick in than traditional edibles, and dosing can be very consistent. Having the option to decarb your material or not is also very helpful, as you can create something that is high in THC to help reduce pain or high in THC-A for its pure holistic and regenerative properties.

Decarbing your THC-A while it's in the flower makes creating tinctures slightly easier and safer, especially when using a solvent such as alcohol as a base. Grind your dried flowers, spread them evenly on a baking sheet and put in the oven at 220°F for 90 minutes to convert your THC-A. Oftentimes, the flowers are then added to a jar of grain alcohol or grape spirits and left to steep for a few days or a couple of months. This allows the solvent to strip the cannabinoids from the plant material, resulting in a dark-green, THC-laden liquid that, when placed under the tongue, can enter the bloodstream in mere minutes. Adding some honey to the tincture can remove some of the bite that the alcohol adds. You can also avoid using alcohol by substituting vegetable glycerin to steep your flowers. While this makes for a healthier option, the steeping time can take much longer in the absence of a solvent. The longer the material steeps, the more potent the results. You can even choose to use a distillate or other form of concentrate in lieu of flowers, but keep in mind that consistent shaking and stirring to fully incorporate the oil into the body of the glycerin is required. Otherwise, the dosing can prove to be inconsistent within the body of the tincture.



Patients requiring a steady dose of THC throughout the day should consider capsules.



Topicals offer relief for a variety of ailments.

TOPICALS

Topicals are one of the oldest forms of cannabis consumption, with their use dating back thousands of years in the form of poultices—ground-up plant material combined with other herbs and applied directly to wounds. Poultices were used to reduce swelling, and they acted as an antibacterial agent to prevent infections and aided in overall healing. Now one can find a large selection of topical creams, gels and salves that use cannabis extracts to combat rheumatoid arthritis, swelling, burns, cuts, skin maladies and even cancer.

Using cannabis that is both high in THC and CBD is effective when creating any cannabis medicine, thanks to the entourage effect. This is the theory that the presence of THC enhances the effect of CBD, much in the same way that THC enhances the effects of terpenes. Starting with the same coconut- or avocado-based medicated oil detailed in the sidebar, melt the mixture in a double boiler over low heat. Add a quarter cup beeswax to give the topical more body and then choose essential oils and herbs based on the maladies you're targeting. Lavender, chamomile, peppermint, eucalyptus, cramp bark and lemongrass are some of the more popular choices, with each herb lending its specific properties to the THC's entourage effect. One can include almond oil, emu oil, jojoba oil or shea butter to affect the creaminess and texture of the topical.

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RSO has eased the suffering of countless patients.

PHOENIX TEARS, RSO AND THE TRUE MEDICINE

RSO (Rick Simpson Oil), more commonly known as Phoenix Tears, has been the (somewhat controversial) measure of the magical healing properties of concentrated cannabis. Created by Rick Simpson, this concentrate is extremely simple to create and has a bounty of anecdotal evidence. Targeting MS, pain, diabetes, arthritis, asthma, infections, inflammations, high blood pressure, depression and sleeping problems, RSO has gained the bulk of its notoriety from its alleged ability to rid people of cancer via ingestion, topical application or suppositories, depending on the location and type of cancer. While there are no scientific studies confirming RSO's effectiveness in treating cancer, we must admit there's a great deal of positive testimonials.

Visionary healer and medicine maker Eddie Funxta explains the process as "trying to put the most amount of cannabis in the jar as fast as possible." He's also used shamanic cacti (San Pedro), mushrooms, peyote and ayahuasca for healing. Working with Simpson, he learned how quality cannabis concentrates can heal the body and mind. Funxta began his healing quest after his brother contracted HIV. Funxta was able to provide a better quality of life for his brother through his battle with AIDS thanks to cannabis-concentrate oil. After his brother's death, Funxta found his calling in providing medicine for countless HIV/AIDS patients, and he soon found he

could help cancer patients as well.

Through his work with thousands of patients, Funxta learned that using quality cannabis flowers as opposed to sugar trim and lower-quality material resulted in medicine that provided better results. Utilizing *indicas* high in both THC and CBD resulted in greater efficacy. He has continued to this day to bring this medicine, which he calls Native Healing Oil (NHO), to the sick and infirm.

The dosage and use is fairly scalable depending on need. As the concentrate is so potent, the starting dose is the size of a quarter grain of rice, slowly increasing to prevent the patient from getting too zonked-out. It can take a patient up to six weeks to be able to tolerate a gram of RSO/NHO, which is generally the max strength recommended. Depending on the potency of the starting flower material, there can be 600-700 milligrams of THC per gram of oil.

The versatility of RSO/NHO is quite broad as well. Simpson used it on his own skin cancer as a topical grease, applying it to the affected area. When treating other ailments, the oil can be directed to the more immediate area via oral consumption or suppository caps.

While many patients swear by RSO/NHO, Funxta emphasizes the shortage of the material for those in need. He urges "growers, breeders and dispensaries to join our medicinal community in healing our sick. Amazing genetics already exist; it all doesn't have to go to the recreational side."

REMOVING PROHIBITION'S STRANGLEHOLD ON CANNABIS COULD REVEAL A STAGGERING NUMBER OF MEDICINAL, INDUSTRIAL AND ENVIRONMENTAL BREAKTHROUGHS. SOME OF THESE ADVANCES CURRENTLY SEEM TOO MAGNIFICENT TO BELIEVE.

Removing prohibition's stranglehold on cannabis could reveal a staggering number of medicinal, industrial and environmental breakthroughs. Some of these advances currently seem too magnificent to believe. The plant has the ability to outgrow trees to produce paper products with a lower environmental impact. The ease of manufacture and the performance of hempcrete provide a low-cost alternative for housing that requires less energy to heat and cool. Cannabis can be used to make lightweight, biodegradable materials that can replace many fossil-fuel-based plastics, which carry an enormous environmental cost as evidenced by islands of plastic found choking our oceans. Industrially, the cannabis plant can replace nearly 90 percent of all fossil-fuel-energy use! During its growth, the plant even absorbs enough carbon dioxide to limit its carbon footprint. You can just imagine the implications!

These benefits are of course in addition to the medical and adult-use aspects of cannabis, which enrich and improve quality of life. Replacing society's dependence on opioids as painkillers can give patients their lives back. Cannabis concentrates hold incredible potential for cancer patients. CBD-rich concentrates can help those afflicted with epilepsy and seizures. The potential of cannabis concentrates is unrivaled, and we haven't even begun to study, poke and prod the plant in earnest due to its classification as a Schedule I drug. The impending ripple effect of descheduling cannabis that lies before us is enormous beyond imagining, perhaps only rivaled by the impact the computer has had on humankind. The singular thing that stands in the way of unlocking Mother Nature's seemingly never-ending bounty is the greed of humanity itself. ✨

**Methods for creating distillate and crystalline can be found in "Concentrated Cannabis" Parts I & II in the April and November 2017 issues of High Times.*



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GROWING
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THE GAME HAS CHANGED

Article by Jeremy Deichen

Beautiful buds ready for harvest

Growing Exposed, a new video series produced by Jeremy Deichen, has been coined "the MTV Cribs of the marijuana industry" for its exclusive look into the once underground world of North America's gardens. Aside from revealing secrets of industry leaders, David Robinson, author of *The Growers' Handbook*, lends his expertise to a segment called *Teachings of the Garden Sage*. You can check out gardens, like the ones that make British Columbia's Kootenay region the Mecca of B.C. bud, on the latest episodes at growingexposed.com.

When Bryan Johnston began growing cannabis, it was the early '90s. He was using 1000 watt bulbs hung from the ceiling commonly referred to as "Donkey Dick" lights. During this period, British Columbia was becoming infamous for the highest quality bud on the planet and people were calling the province's crops "Beaster". A lot has changed in the 25 years since — including his setup and the base plant food he uses, thanks to Green Planet Nutrients.

An environmentally conscious guy, Bryan says he remembers, back in the day running those 1000 kilowatt bare bulbs. Today, his indoor garden uses a smaller wattage but yields dramatically more per watt than ever before.

**"Everything has changed.
The game has changed,"**

he says. "I'm running doubled-ended P.L. lighting with four Spectrum King 600-watt LED lights and doing a massive cross spectrum of light, running four 315-watt P.L. ceramic metal halides. So I'm totaling just under 4,700 watts and yielding on average, two pounds or more for every 1,000 watts of light."

The most recent change to Bryan's garden wasn't in setup though, but to a new base plant food. Manufactured by Green Planet Nutrients, Dual Fuel is a highly concentrated, two-part formula that provides all the energy plants need without the need for calcium or magnesium additives. It's known for an easy application process which leaves less room for error.

"I've tried different brands but I've been using Green Planet's Hydro Fuel and got fantastic results, so when I went to my local grow shop and got some samples of Dual Fuel about two years ago, it wasn't a stretch to give it a try," Bryan says. "But on some level, any type of switch is a leap of faith as a grower. People who consume my product are used to a level of quality and I can't afford to give them anything less than the best."



Drying buds on the drying rack

Growing Lemon Haze since 2011, Bryan says this strain takes a little longer to flower than normal but the flavour and sativa experience is well worth it. He finds it easy to grow and the resulting product very consistent in quality. With the switch to Dual Fuel, Bryan says he noticed changes to his plants almost right away.

"The switch was really easy and the first noticeable difference was that my plants became way greener than before and they stayed lush green into the later stages of flower. It's also cleaner and I don't have salt residue or buildup. Plus I'm getting better and faster yields, so I'm saving about a week overall on my crop. I've done the math on what it costs to run other brands and not only am I saving money but I'm having better results."

With Dual Fuel, Bryan uses only three additives: Green Planet's Massive Bloom Formulation, Finisher, and Terpinator. He says when he's tested plants grown with the additives versus ones without, he's noticed way more cannabinoids.


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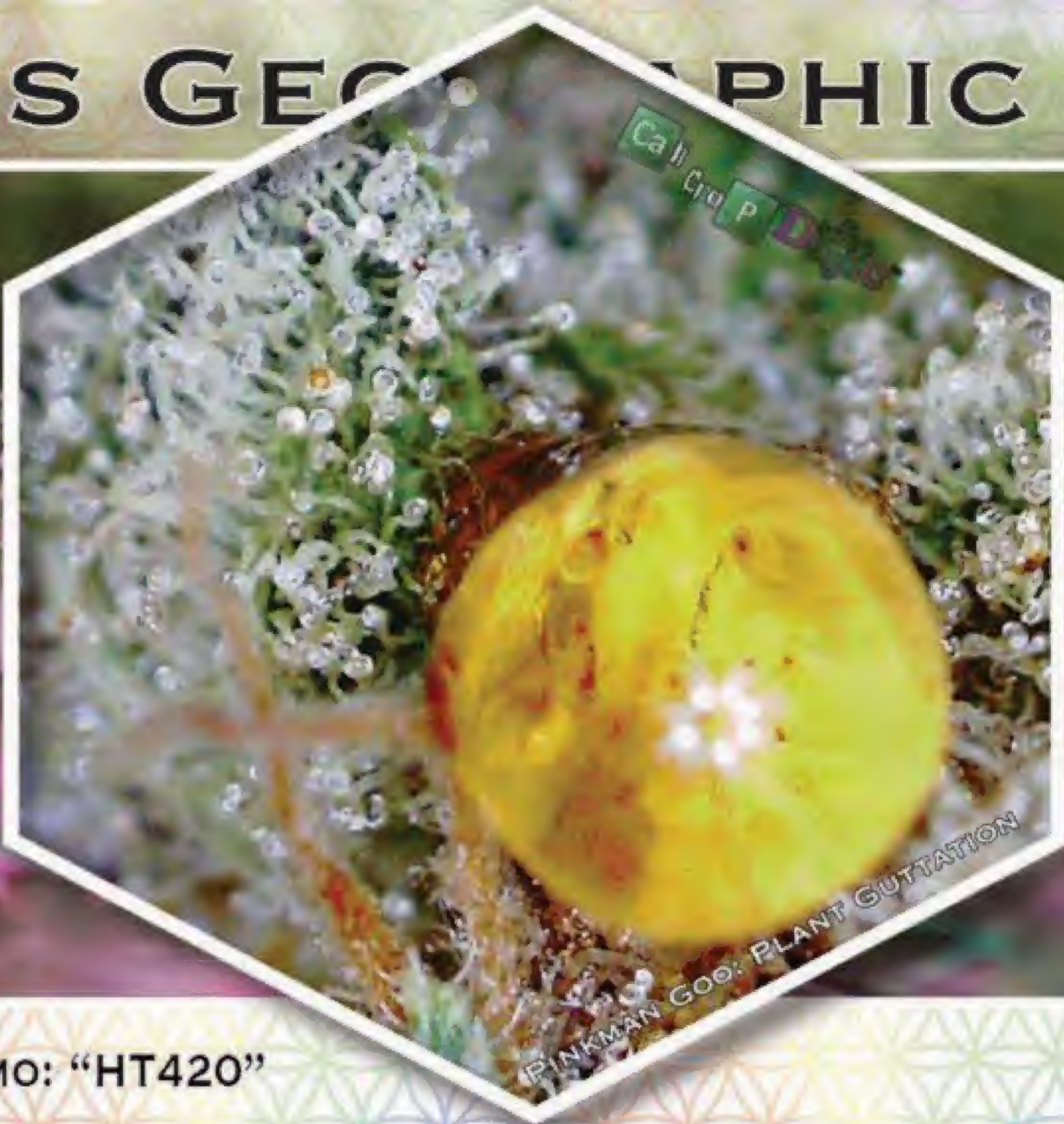


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HOW TO HIRE A POT LAWYER

RUN-INS WITH THE LAW ARE SADLY COMMON FOR CANNABIS CONSUMERS. OUR HANDY GUIDE EXPLAINS WHEN AND HOW TO RETAIN THE LEGAL SERVICES OF THE BEST POT LAWYER POSSIBLE.

BY MADISON MARGOLIN

WHEN BILL SHERMAN (this is not his real name—due to the sensitivity of his case, he asked us to use an alias) came home to a dozen narcotics agents in his apartment one night, he knew he would need a pot lawyer. The cops had forced entry without a warrant, having figured out that Sherman was receiving out-of-state cannabis-oil shipments, which he used to treat his chronic obstructive pulmonary disease. Living in Mississippi, where legal weed is only the stuff of fairy tales in far-off lands on the West Coast, Sherman had been risking his freedom to self-medicate with cannabis.

“They said they knew I had the oil and they wanted it, so I said, ‘Sure, where’s your warrant?’” Sherman explains. “They said to me, ‘We don’t have a warrant, and if you don’t sign this piece of paper, we’ll take your son away.’” Sherman’s young son is on the autism spectrum and has an immune deficiency; no one else knows how to properly care for him.

“They said, ‘We’re taking your son, putting you in jail, and by the time you get out of jail, you’ll have to fight the courts to get custody of your son back,’” Sherman says. “So, I had no choice but to sign the piece of paper saying they could search my property.” Sherman gave the cops all his cannabis oil, thankful to keep his son. “But without my knowledge, they held me in contempt of court for court dates I didn’t know I had,” he says. “I eventually was arrested by a cop who was looking for me.” He was facing four to 16 years behind bars.

Stories like this are far more commonplace than you might think. Sherman needed a lawyer with experience in cannabis law, but he had no idea where to look. “I didn’t know who to get; no lawyer specializes in that kind of thing where I was from in Mississippi,” he says. The lawyer Sherman eventually found was a friend of his mother.

FINDING THE RIGHT LAWYER

Ideally, if you're busted for weed, you'd hire a marijuana lawyer—someone who specializes or has extensive experience in this area of the law. You'd want to be sure that she not only is up to date with the most recent changes in marijuana policy on local, state and federal levels, but is also familiar with how various judges and courts tend to treat marijuana cases.

First and foremost, regardless of your lawyer's niche, you need to have confidence in him. "The most important thing is that you believe you can trust your lawyer and speak openly to them even about difficult things that are really personal," explains New York attorney Joseph Bondy, who has practiced federal criminal defense, with a specialty in marijuana law, for more than 23 years. "Get someone who listens, someone who cares about you," he says. If a lawyer and client establish that relationship and bond at the forefront, the rest becomes easier, Bondy says.

Starting with a strong foundation between lawyer and client, the lawyer can dig into the case with care, researching relevant statutes to use in court.

But that personal element is vital. "At the end of it all, your lawyer bridges you to the court or jury, humanizes you in a way that persuades people to give you the benefit of the doubt or not to hurt you or send you to prison," Bondy says. "For me, it was always my ability to have that emotionally tight relationship with somebody so I could be their bridge that allowed me to succeed."

RESEARCH YOUR LAWYER

It should go without saying: Google terms like "marijuana lawyer," "marijuana defense lawyer," "marijuana criminal defense lawyer," "weed lawyer [insert your city]," etc. Most likely, among the hits will be a link to NORML's website. NORML—the National Organization for the Reform of Marijuana Laws—has a list of lawyers who handle pot cases and are members of the nonprofit's Legal Committee. This is a sure way to vet whether your attorney has experience in cannabis law. Visit lawyers.norml.org and click on your state to find a lawyer in your area. If NORML's list doesn't include anyone in your city, call another lawyer in the state for a referral.

In order to fully trust your lawyer, you'll want to know as much about him as possible. Look for all the negative reviews you can find in order to vet your lawyer, says Bondy, while keeping



BE SURE THAT
[YOUR LAWYER] NOT ONLY
IS UP TO DATE WITH THE
MOST RECENT CHANGES
IN MARIJUANA POLICY ON
LOCAL, STATE AND FEDERAL
LEVELS, BUT IS ALSO
FAMILIAR WITH HOW
VARIOUS JUDGES AND
COURTS TEND TO TREAT
MARIJUANA CASES.

in mind this is all just fodder for a first meeting. "I tell all my clients that I don't want you to hire me unless I'm your first choice," he says. "If you find some other lawyer who's better for you, I want you to hire them."

Look into your lawyer's professional affiliations. Is he a member of the NORML Legal Committee? The American Civil Liberties Union (ACLU)? The National Association of Criminal Defense Lawyers (NACDL)? Has he received any bar association awards? Has he branded his law firm in association with cannabis (e.g., 1-800-420-LAWS)? And how long has he been practicing law?

If you're in the cannabis industry, whether in a legal or unregulated market, ask your colleagues which lawyers they've used in times of trouble. And if you get busted out of state, be sure to find a lawyer close to the jurisdiction where you've been arrested.

Be sure to confirm with the local bar authority or local state licensing authority that the lawyer is indeed licensed and current, Bondy cautions. Confirm that the lawyer has no instances of malpractice, and if his record is indeed tainted, ask him what happened. Give him a chance to explain the instance, as he may have had a disagreement with a disgruntled client. Not every case turns out the way a client may want, but that doesn't mean the lawyer is bad—even if the client, whose expectations may have been impractical, leaves a terrible Yelp review.

LAWYERS ARE EXPENSIVE—DO I NEED ONE?

While federal law says marijuana is a Schedule I controlled substance, it only usually applies if you're busted on federal land or moving weed between states—in which case, whether or not to get a pot lawyer shouldn't even be a question. Otherwise, local law generally applies, and what constitutes a misdemeanor or felony changes from state to state and could also depend on your prior record.

Here's an example of the one instance in which you probably *don't* need a lawyer (note that this example will have slight variations in other jurisdictions): If you're in a place like New York and get busted with a joint on the street, you'll probably hesitate before putting money down on a retainer. As opposed to the old days where you'd get arrested and detained overnight, now you'll probably only be charged with a desk-appearance ticket. Here's where the term ACD (adjournment in contemplation of dismissal) comes in:

"Under New York's penal law, if a person is caught for the first time burning marijuana in public or exposing it in public view, then they are eligible to have their case adjourned for a period of time, generally three to six months these days, at the end of which period, if they've behaved themselves and not gotten arrested again or committed new crimes, the case will be dismissed and the record sealed," Bondy explains. "When people call me, I explain this to them. I tell them that's what will happen to you with or without a lawyer. I say you can achieve this without me, but certainly you can retain me if you wish. And although you could retain me and have me come to court with you and pay a legal fee, by the time we get out the door, you'll have been given an adjournment in contemplation of dismissal in less than an hour, and I don't feel right telling people to pay me a legal fee without their understanding that this is a statutory right."

However, if you're not a US citizen, have a prior record or have a more complicated case than the example above, you'll want to get a lawyer.

To understand what you could be charged with according to your locality, visit a site like NORML to research marijuana penalties for possession, sale and cultivation from state to state.

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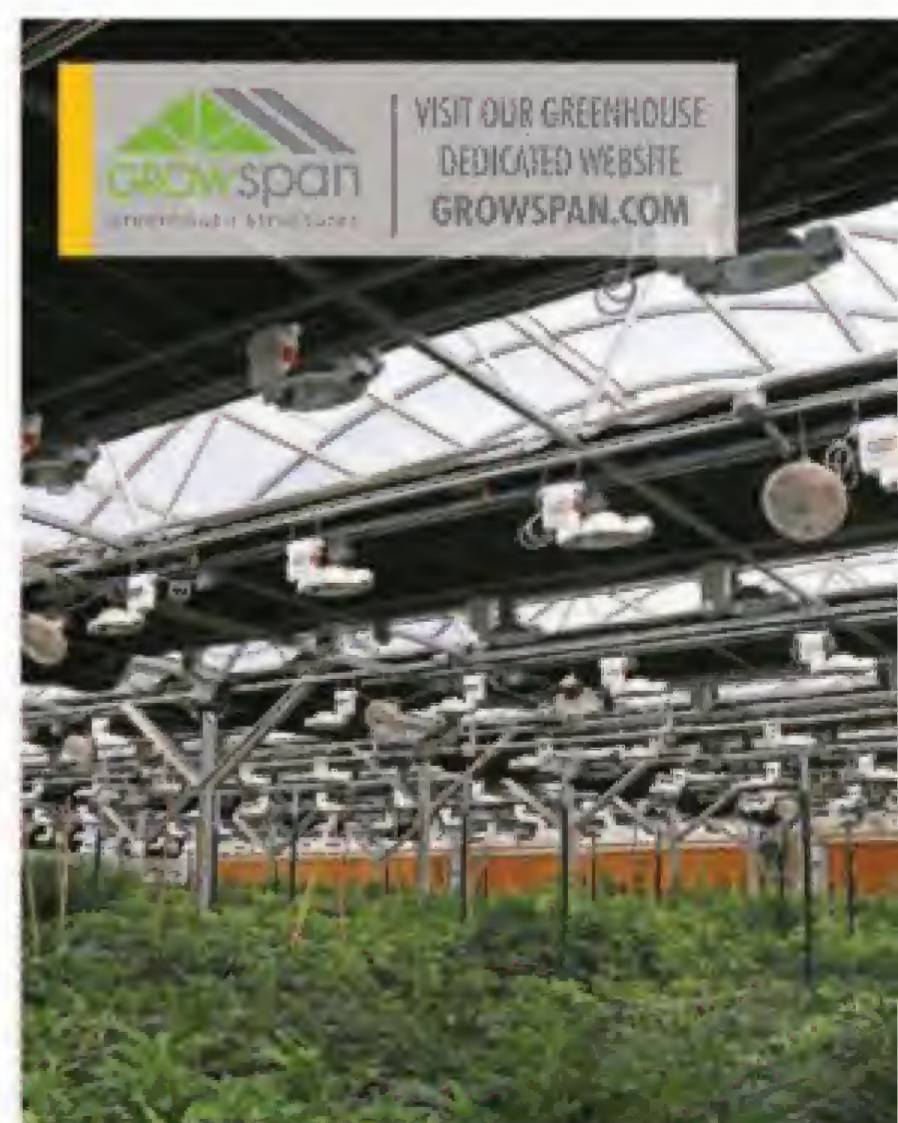
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CAN YOU GET BUSTED IN A LEGAL-POT STATE?

Absolutely. Whether you're dealing in the black market, shipping weed out of state or driving with more than what your state's adult-use or medical-marijuana law recognizes as a reasonable amount for a patient or adult consumer, you're at risk of committing at least a misdemeanor.

"Know the law, know your rights," as California marijuana criminal-defense lawyer Bruce Margolin often says. "Because each courthouse and prosecutor's office around the state have their own ways that they proceed on cases and have their own status about how they want to resolve them, it's important a lawyer have a lot of experience in that area so they can convince prosecutors to dismiss or reduce the charges by negotiation or plea bargaining."

Especially in a state like California, where a patchwork of 482 jurisdictions each has its own marijuana regulations, it's easy to violate civil code if you're not careful. While criminal law is a bit more consistent, cops' attitudes and priorities may change from region to region, posing a greater risk to your freedom where you might not expect it. In places like the Emerald Triangle, for instance, drivers can be subject to narcotics checkpoints, where police can simply search your car.

BUSTED ON THE ROAD

If you're going to travel with cannabis across the country, make sure you know which attorney you'd call if you get caught. "You should always have a criminal-defense attorney lined up ahead of time," says Oklahoma lawyer Jay Ramey, a member of the NORML Legal Committee. "Tell the cops you have nothing to say and need to talk to an attorney. If you don't have anyone to call, you'll look stupid." But stay away from the "jack of all trades" attorneys, or those who have no experience in criminal law, Ramey cautions.

Police in states like Oklahoma, for instance, are very zealous in their enforcement of marijuana law, Ramey says. "I was doing a trial once, the prosecutor suggested that [my client] should have known better than to drive through Oklahoma with medical marijuana." People with out-of-state license plates are most at risk, especially if you're from a legal state. At least 10 percent of Ramey's clients don't even live in Oklahoma.

"First and foremost, it's out-of-state

taggers. Then one of the first things they look for is a male driving alone. And a rental car is another," Ramey says. Other times, the trooper will just act on a hunch and pull someone over for a (real or made-up) traffic violation.

"Some medical patients seem to think, 'Oh, I'm legal in California, they can't do anything to me in Oklahoma,'" says Ramey. "Oh yes they can. They don't care about your medical license. They don't give one whit about your medical issues. They'll prosecute you to the full extent of the law."

WHAT TO DO WHEN YOU HAVE A RUN-IN WITH THE COPS

In most cases, the smell of weed alone is enough for a cop to search your car. (In legal states like California, for instance, it's not, unless they have reason to believe you have more than the legal limit.) So, for starters, don't hot-box the car. Don't drive and consume at the same time. If a cop stops you, here are the three main talking points you should remember, according to Ramey:

1. I do not consent to any searches. (Pursuant to the Fourth Amendment to the United States Constitution.)
2. I am not answering any questions and I want to speak to an attorney. (Pursuant to the Fifth and Sixth Amendments to the United States Constitution.)
3. I do not agree to stay here with you for any reason. Are you detaining me or am I free to go? (Pursuant to the Fourth Amendment to the United States Constitution.) If you are free to go, then go! If you are being detained, see numbers 1 and 2.

Always be polite to law enforcement. If you're smoking weed in the car, you're subject to a ticket in places like California, or worse in nonlegal states. If you're suspected of a marijuana DUI, you can still refuse to answer questions about when you last consumed or refuse to take a field sobriety test. If you're arrested, however, they may require you to take a drug test. In some cases, if you refuse, you could lose your driver's license and it may be seen as an admission of guilt.

HOW TO FIND A LICENSING ATTORNEY

If you're interested in starting a cannabis business and need help following the local laws and getting licensed, you'll likely need to find a good attorney. First determine what kind of

business you want to open and where you want to open it, advises Los Angeles cannabis-business attorney Ariel Clark. Because you'll need to navigate both state and local law, you'll need an attorney who's familiar with the local regulations in the jurisdiction where you want to operate your business.

"There are attorneys who tend to focus more on one segment of the [cannabis] vertical, and certainly, for example, we have a lot of clients who are growers, and so we have a lawyer who works for us who specializes in water law and all the complexities that relate to water and cannabis cultivation in California," Clark explains.

When it comes to cannabis business, you'll need an attorney who is familiar not only with cannabis regulations, but also with property law, tax law and other legal fields that cannabis touches. You may also, nonetheless, want a criminal-defense lawyer lined up. While violating code is often a civil offense, once you're out of compliance, you may also have to defend yourself in criminal court for issues like possession for sale without a license. Moreover, you may also want the added protection because any marijuana business is still illegal in the eyes of the federal government.

In some cases, you'll want to put together a team of attorneys: a criminal-defense lawyer, a cannabis-business lawyer, a real-estate lawyer and so forth. Working through referrals often helps, once you identify your main cannabis-business lawyer. Scope out trade associations like the Southern California Coalition or the National Cannabis Industry Association and find someone who's active in the space and current on the ever-changing marijuana regulations.

STAY UP-TO-DATE WITH FEDERAL LAW

At the end of the day, marijuana is still illegal on the federal level. While it may be legal or decriminalized where you live, thousands of people are still serving life sentences for marijuana crimes alone. Activist Deedee Kirkwood writes letters to these "marijuana lifers" and fundraises for their attorneys' fees and living expenses behind bars (sneakers, toothpaste, etc.). Learn more at potfairy.com.

With or without a lawyer, the best form of protection you have is sheer knowledge of the law. If you know the law, then you know where your rights begin and where they end. ✨

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PATIENTS

Sifting through the changing landscape of medical marijuana laws in your state can become overwhelming. MarijuanaDoctors.com is here to help.

Our site is designed to serve patients and physicians alike, providing information about state legislation information, practices nearby, and dispensaries in your city for patients and comprehensive outreach services for physicians to connect with patients in the area.

Your Journey with MARIJUANADOCTORS.COM

Patients can start by checking our database of legal and non-legal states to learn about medical marijuana laws in their states. Our state database includes information about qualifying for medicinal cannabis and how to complete the registration process.

For patients with limited mobility, we have information about telemedicine services in qualifying states -- which helps bring care right into the patient's home.

Find a QUALIFIED PHYSICIAN

Once the registration requirements are known for each state, patients can check out our list of physicians certified to recommend medical marijuana. Not only can patients search for physicians that are nearby, but they can also view reviews and ratings for physicians to get a feel for a practice before making an appointment. We've made it easy for patients to pick the right physician -- including practice information, office hours, and pre-visit requirements. Patients can schedule their appointment online right from the comfort of their home. A recommendation from a qualified physician in our database helps patients obtain the legitimate medical documentation they need in order to start the registration process for a medical marijuana card in their state.

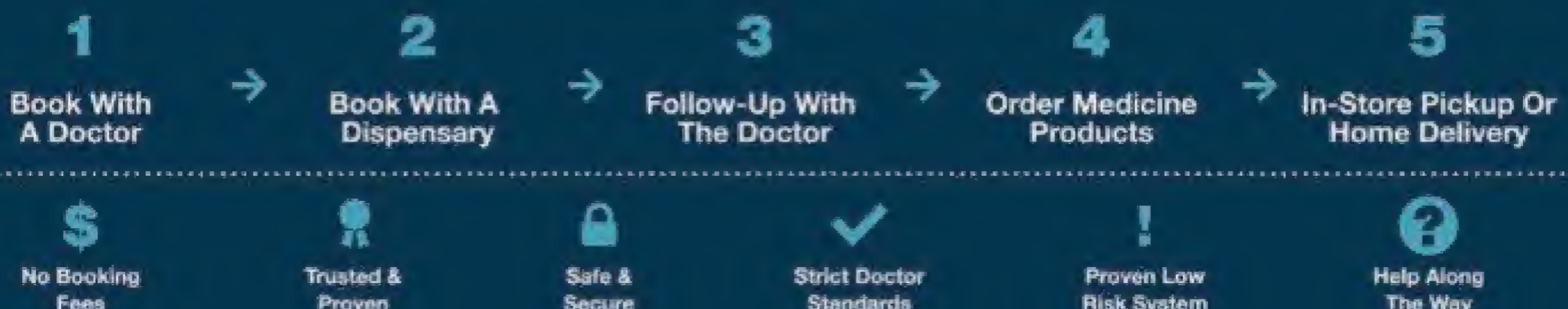


Fill Your Recommendation CLOSE TO HOME

After patients have completed the registration process and obtained their medical marijuana card, MarijuanaDoctors.com can help them find a dispensary to fill their recommendation. Not only do we constantly update our list of dispensaries in legal states, but we have our finger to pulse of non-legal states with changing legislature and are first on the scene when dispensaries open in these states.

Patients can find rating and review information about local dispensaries to help them find the best budtender for their needs. Soon our team will be integrating ordering functionality so that patients can order directly from dispensaries, making it even easier to get the medical marijuana they need to treat their qualifying conditions.

The Nation's #1 Medical Marijuana Network



Marijuana Doctors: One-Stop Portal

If you're a medical marijuana patient or doctor, finding the resources and dispensaries you need can be difficult.

If you're a medical marijuana certified physician, MarijuanaDoctors.com has the resources to connect you with thousands of patients every month.

PHYSICIANS

Our subscription services help us optimize your profile to help draw more patients to your practice. We are constantly adding services to help physicians connect with patients in this digital age.

Digital Appointment Assistant PRACTICE MANAGER

We are happy to offer a paperless HIPAA Compliance Check-In System for physicians registered on our site. Practice Manager, the new electronic check-in system, will process forms and instantly store files into the EMR. The system will make processing patient paperwork easier, leaving physicians and practice managers just to review notes and schedule follow ups. The check-in system will also have functionality to set up reminders for patients about scheduling follow-up appointments through the Marijuana Doctors site, text, or email. The system will also give patients the opportunity to rate the practice and their experience, helping boost the practice's credibility with great reviews and testimonials.

Our new registration and digital signature automation will technically streamline workflow for practices using telemedicine. Doctors can connect with telehealth patients by simply clicking a few buttons in their Practice Manager. Once a doctor connects with a patient through Practice Manager, patients have the ability to see when doctors are available for a live chat about their medical marijuana treatment options. Doctors have the ability to use MarijuanaDoctors.com to have patients fill out telehealth forms, process payments, receive medical records, schedule a HIPAA compliant virtual appointment, add notes, finalize appointments, and schedule follow-ups to boost patient retention. This system is the most

seamless way to manage your practice's patients and reach out to new patients by connecting with the tens of thousands of unique visitors that use MarijuanaDoctors.com every day to understand medical marijuana.



New Functionality BUDTENDERS & DISPENSARY OWNERS

Catering even further to the medical marijuana industry, MD also provides marketing solutions for producers, dispensaries and cannabis clinics. Once a patient has received a medical marijuana recommendation and the physician has registered the patient on the state's department of health website, patients can now request an appointment with local dispensaries using our network.

MarijuanaDoctors.com gives producers the

ability to vertically integrate within their market, understanding that patients using medical marijuana to treat debilitating and chronic conditions hold a lifetime value as customers of a dispensary.

As with physicians, producers now have the ability to create profiles optimized for their location and benefit from the patient funnel that is generated by our network's skillfully developed infrastructure.

Producers will now share the

automated-functionality of scheduling patient appointments, and have access to the telehealth portal by which they may consult with patients online, instead of in-person. Furthermore, producers may also choose to become featured advertisers, opting for advanced placement in the state and city static listings, which always come up first in the search results.

ABOUT



patients to have their medical marijuana needs met in one location. In order to best serve our patients, we will provide information about medical marijuana laws, availability of physicians in patients' areas, on-demand access to physicians and pharmacists,

Marijuana Doctors seeks to educate patients in states where medical marijuana is legal. Our goal is to be one-stop resource for

information about dispensing options, delivery services, ancillary products, easy online ordering, and automated product ordering. As we continue to expand our patient resources, we are excited to offer 360-view tours of featured dispensaries, the cultivation process, the manufacturing process, and products. Our patients are able to do everything—from research to ordering to reordering—from the comfort of their homes.

As a MSO, Marijuana Doctors can facilitate these services on behalf of medical organizations with medical marijuana licenses in qualifying states. We have created security checks and balances to ensure that deliveries and sales can only be obtained legally, taking the pressure off our patients. As your go-to resource for marijuana, we will keep adding the information you need to make receiving the medical marijuana you need to treat your qualifying condition as easy as a click.

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By MARY JANE GIBSON

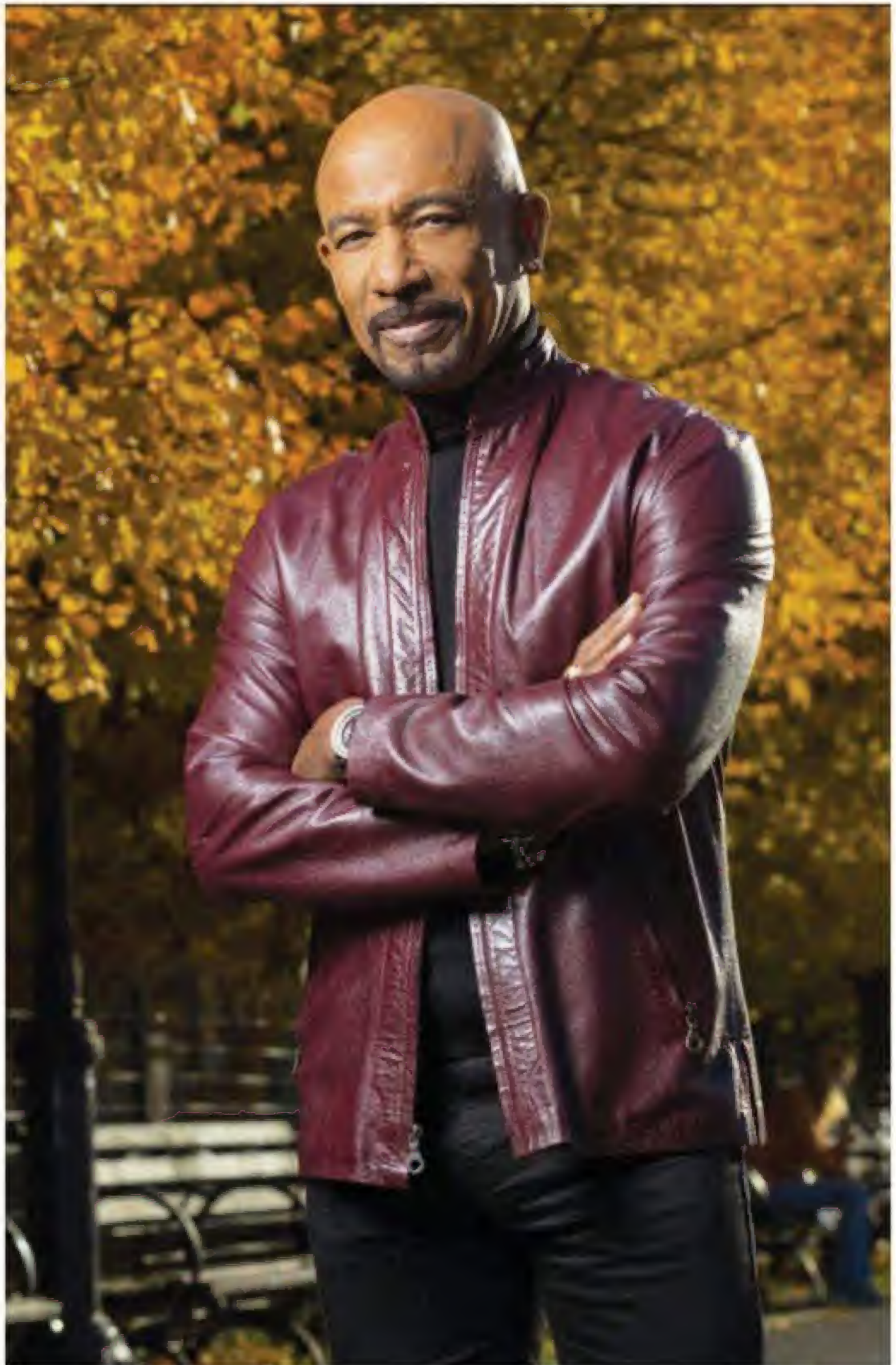
MONTEL WILLIAMS

THE HIGHTIMES INTERVIEW

MONTEL WILLIAMS HAS A LOT TO SAY ABOUT MARIJUANA. THE TALK SHOW LEGEND WAS OFFICIALLY DIAGNOSED WITH MULTIPLE SCLEROSIS IN 2000, AND USES MEDICAL CANNABIS TO MANAGE SYMPTOMS OF THE DEGENERATIVE DISEASE. WILLIAMS SERVED A TOTAL OF 22 YEARS IN THE MARINE CORPS AND THE U.S. NAVY, SO HE WASN'T A RECREATIONAL CANNABIS USER—BUT WHEN HE WAS PRESCRIBED OPIOIDS TO MANAGE THE PAIN CAUSED BY MS, HE QUICKLY DISCOVERED THE HEALING BENEFITS OF MARIJUANA.

FOLLOWING A LONG AND STORIED CAREER AS ONE OF AMERICA'S FOREMOST TELEVISION PERSONALITIES, WILLIAMS HAS SPENT MUCH OF THE LAST TWO DECADES CAMPAIGNING FOR MARIJUANA LAW REFORM. AS AN OUTSPOKEN ADVOCATE FOR AMERICA'S SERVICEMEN AND WOMEN, HE IS LEADING THE PUSH FOR VETERANS TO LEGALLY ACCESS MEDICAL CANNABIS WITHOUT THE THREAT OF LOSING BENEFITS. AND LAST YEAR, HE JOINED THE CANNABIS INDUSTRY AS AN INVESTOR AND BUSINESSMAN, LAUNCHING A LINE OF MEDICAL CANNABIS PRODUCTS UNDER THE BRAND NAME LENTIVLABS.

WILLIAMS STOPPED BY *HIGH TIMES* FOLLOWING THE LAUNCH OF LENTIVLABS TO SHARE HIS DEEP KNOWLEDGE OF THE HEALING BENEFITS OF CANNABIS, HIS THOUGHTS ON RECREATIONAL WEED, AND HIS VISION FOR THE FUTURE OF THE CANNABIS INDUSTRY IN AMERICA. AT THE CORE OF HIS MISSION: DESTIGMATIZING MARIJUANA THROUGH ACTIVISM, EMPOWERMENT AND EDUCATION.



It's good to finally sit down with you.

Can I say something to *High Times*? I'm 61 years old this year—how long have you guys been in existence?

Forty-three years.

Holy moly. Forty-three years! That's taking me back all the way to somewhere around age 17-18. You came out when I entered the military, when I had to be drug-tested. So, for 22 years, I got drug-tested. Eighteen years ago, I'm diagnosed with MS. First place I turned? *High Times*. So, in some ways, I thank you because you are really a part of my journey.

Thank you very much. So, when you were in the military and you were being drug-tested, were you able to use cannabis at all during that time?

Absolutely not! Are you kidding? I would not have considered myself a smoker of any kind until about a year before my diagnosis—and it's really kind of weird how that came about. Was it inherently something that my own endocannabinoid system understood was about to happen, and I was about to have a havoc wreaked on my soul forever with this illness called MS, that I started seeking things that would make me feel better?

When I got diagnosed, I was put on opioids and realized, "Are you kidding me?" It's now 17 years later and I'm still suffering from some of the damage from those opioids. So I shifted over into cannabis—and have not looked back one day!

That's when you began to consider cannabis as medicine?

When I was first diagnosed with MS—I got officially diagnosed in 2000—at that point, my initial symptoms were extreme neuropathy. Neuropathic pain in my feet, my shins, my side. I had multiple



"WHEN I GOT DIAGNOSED, I WAS PUT ON OPIOIDS... IT'S NOW 17 YEARS LATER AND I'M STILL SUFFERING FROM SOME OF THE DAMAGE FROM THOSE OPIOIDS."

other symptoms I don't even want to go through. There were enough that it was a plight every day, and the only way I could control it was [through] multiple medications. I chased multiple medications through multiple doctors. By the time 2001 rolled around, I was probably getting prescriptions from nine different doctors. I was CVS's best friend, believe me.

You know, there are certain people in our society who don't have the right receptors for certain medications. Not every human being can be addicted to opioids. I have one of those issues

where opioids don't work effectively on me; it requires probably two to three times the amount to get even the slightest effect, but then the detriment from that three times as much is so harmful that it does more damage, so there was a point that I'd take five, 10, 15 different types of pills, all opioids. Twenty-five, 40, 50, 100 milligrams a day! And doing nothing but chasing a monster that I couldn't slaughter, which is pain.

By the time I went back to my MS doctor, who was a forward-thinking younger guy, he said to me, "Look, I can't keep writing you

prescriptions for this stuff. And clearly it isn't working, 'cause as many as you take, you shouldn't even be walking in here. So you should figure out something else—and I know people like you, with MS, who swear that marijuana works for them."

So I went back and dove in deeper than I have delved into anything in my life. I spent my entire [military] career as a special-duty intelligence officer having to study everything about every foreign nation that you can think of, and constantly be up to speed on what was going on in the world. If you're telling me something might literally change and help my life, where I was already ready to take my life, I was on it. So I started studying. This was back in 2001, back before anybody was talking about CBD, anybody was talking the word "cannabinoid"; we only knew THC and Marinol. I got Marinol, I have some in my hotel right this minute—most worthless thing ever produced by man. That's why it's one of the most expensive drugs produced on the marketplace right now.

It's synthetic.

It was not done maliciously, it's just synthetic anything is not better, I believe, than what nature put here. Nothing can compete. Nothing will compete with this plant. I started studying, I started researching, I knew there was something called cannabinoids. They had only identified THC, they were trying to come up with what the names of these other things were, and we *still* don't know them all, and no one will tell you that the genetic code has been completely broken.

I found out as much as I could and realized I needed to completely saturate my body with cannabinoids, to see if I can get some neuroprotection against a disease that ravages my nervous system. And my brain and spinal cord



DOSIDOS



TOTAL THC: 26-31%
TOTAL ACTIVE CANNABINOIDS: 27-33%

THCa:	26-29%	Total CBD:	0-2%
Δ9THC:	1-2%	Total CBG:	0-1%

TOTAL TERPENES: 1-3%

Pathogens: Pass

Fungus: Pass

Mold: Pass

Pesticides: NONE



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Dosidos is considered to be among the most powerful strains in the world with average potency usually testing around 30% THC, making it a strain recommended for experienced users. Its aroma is pungent, with sweet notes from its Cookies heritage, and earthy undertones, all accented by a slight floral funk. Dosidos eases you into a smooth relaxing body buzz, creating a deep physical tranquility, initially accompanied by a rush of uplifting euphoric energy and sativa-like cerebral effects.

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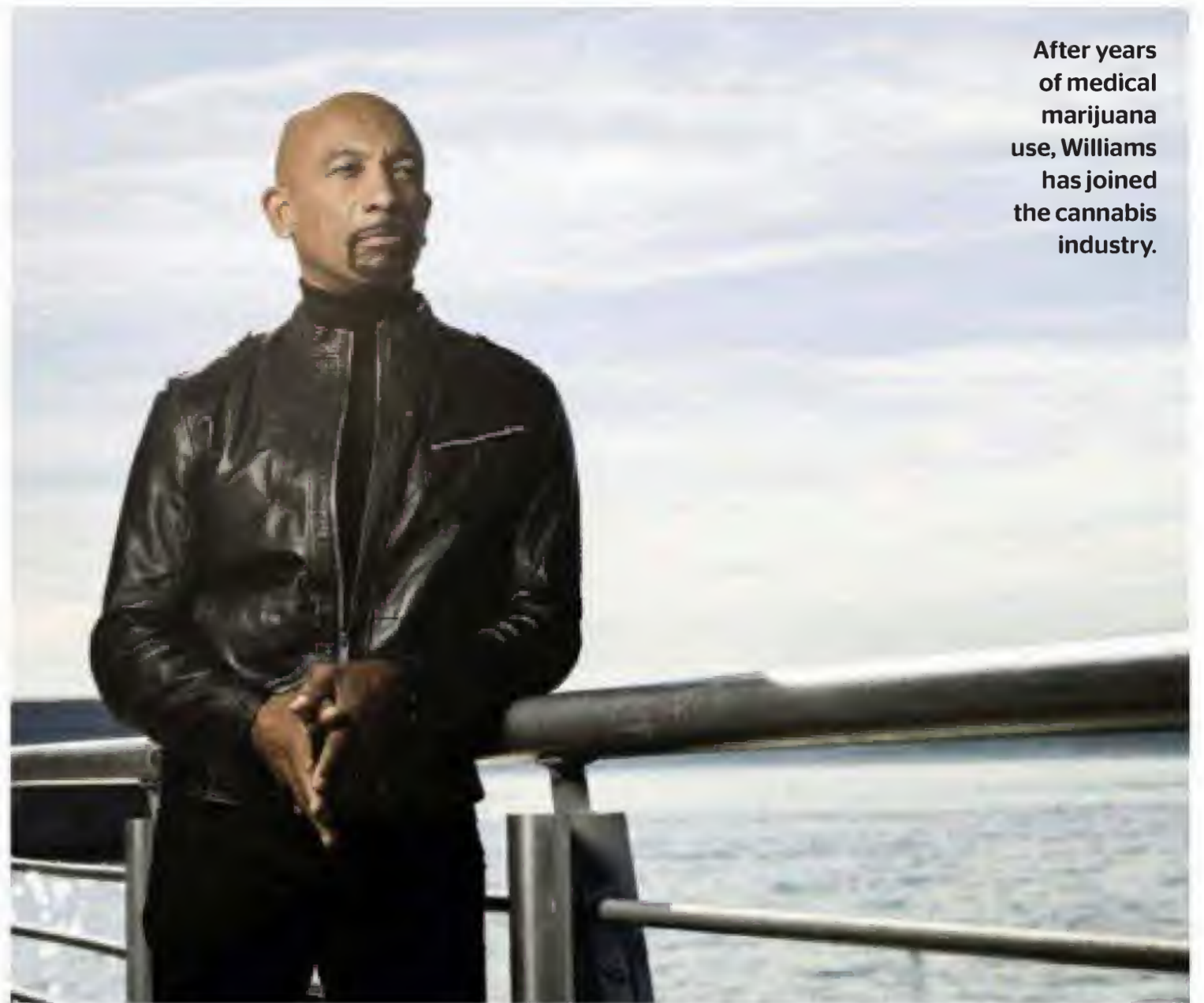
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After years of medical marijuana use, Williams has joined the cannabis industry.

"ALONG THE WAY, THERE'VE BEEN A LOT OF PATIENTS LEFT ON THIS BATTLEFIELD. SUFFERED IN PRISON, DRAGGED OUT OF THEIR HOMES IN WHEELCHAIRS BECAUSE THEY WERE GROWING MARIJUANA."

specifically. And I will say, for me—I am not in any way, shape or form claiming this for anyone else—but I believe that it has helped slow down the progression of my illness.

Now, since I believe that so strongly, I have decided to replicate what it is I take for myself, and give that to others, and am trying to do so in the most efficacious way it can possibly be produced. We've developed a product that I think, right now, I'm more proud of than anything I've done to date, because I think we have one of the safest, purest products on the market, and I'm doing something that a lot of people talk about, but I don't believe that they really understand. That is, I'm trying to give you combinations of THC, CBD and a few other cannabinoids that may be a little more bioavailable to help you elicit your own titration level. That's why Lenitiv was created.

You have different formulations?

Yeah, not only formulations. What I've done—and I'm going to try to do this in every single step along the way—I recognize, see it, as we look at cannabis

development, distribution, how we're looking at it as a nation, you know, for the 17 years, the last 40 years you guys have understood that this has been a battlefield. Along the way, there've been a lot of patients left on this battlefield. Suffered in prison, dragged out of their homes in wheelchairs because they were growing marijuana in their backyard and giving it to other people who were patients like themselves. And now, all of a sudden we have this incredible green rush and you know, "Whoo-hoo!"

Well, okay, I do not disparage anyone an opportunity to make money. Please do your thing. But if you're going to do so and you're going to call it medication, then produce it that way—and ensure that people like me can feel safe when I take your product. Now, again, adult usage nationwide, I'm 61 years old: I defy you or anybody else to tell me what I can do in the privacy of my own home. If a state and its residents pass a law that says "We the constituents want it this way," I say everybody else needs to back up, shut up and get out of the way, okay? But how dare you, selling for adult usage, say you have a medicine that can

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be deleterious to a person or a patient that has neurological issues, and your product has residue of your extraction formula, or the way that you produce it could elicit a seizure? I say you need to stop.

Out of everybody that's going to use marijuana in this country, I'm going to tell you there are 20 percent of us that are people like me, that are patients, and I demand a product that I can trust. Certain processes I don't trust. And I want the option. So that's why I produce it.

The oil that we have right now is edible, vappable, smokable and dab-bable. Right now in the marketplace, I have a 10/90 THC/CBD, a 50/50 and a 95/5. We

know for a fact that [cannabis research pioneer] Dr. Mechoulam stated unequivocally that cannabinoids work in an entourage effect. To separate them would be to try to have an orchestra play Beethoven or Tchaikovsky and

not have drums and cymbals. Skip it. It's not the same song. And it never will be, you cannot remove the entire rhythm section and get the same music.

How do you talk to people who don't understand cannabis as medicine? How are you changing minds?

We still live in a society where we give doctors the moniker of God, so we bring in those doctors who are believers. And convince doctors by getting doctors to convince doctors. You don't convince them just because we preach. We have to actually start to discuss it with people.

What about educating people who are nonconsumers—having advocates who are not necessarily using cannabis but who are on our side and part of the conversation?

I think what has to happen is you have to give your parents the opportunity to open up and step out of the closet. I know my dad, who is 86, I was just saying we have to give him—and his friends—the right to step out of the closet. Okay? 'Cause you know they're in the closet.

It's the fasting-growing segment of users.

There's more cannabis being used among baby boomers; it is a geriatric drug now in Spain and in Israel. People have finally woken up to the fact: "Why isn't it a geriatric drug here in the United States of America?" I'm just so crazed at the fact that we don't also take time continuously to educate, because we think that since we told the story once it doesn't have to be told again, but people very quickly forget.

Let's work together with multiple sources and say, "It's been great to preach to our choir—social, cultural, scientific. We've only been preaching to *our* social culture." We have to step outside of [the cannabis community]. Every

"THERE'S MORE CANNABIS BEING USED AMONG BABY BOOMERS; IT IS A GERIATRIC DRUG NOW IN SPAIN AND IN ISRAEL. PEOPLE HAVE FINALLY WOKEN UP TO THE FACT: 'WHY ISN'T IT A GERIATRIC DRUG HERE IN THE UNITED STATES OF AMERICA?'"

person that'll look at this will remember that five years ago you were at Aunt Betty's house with the rest of the family gathering, and you and cousin Stevie jumped in the car, drove down the block, smoked a joint, came back to the party, grabbed a beer, walked out back like you didn't do something. And everybody didn't turn around and look at you ugly, they just, like, looked, right? The whole country has changed in this attitude, so now what we have to do is to start to be bigger trumpets. And there's ways to do it. I'm about to set this off, I'm telling ya.

What do you recommend as action?

Like I said at the beginning, it's our responsibility to educate ourselves as much as we can on every single issue we have the audacity to open our mouths about. A lot of people talk about cannabis; *elected officials* talk about cannabis, and those people lie right through their teeth because they are the ones that paid for the research and they checked the box that said "I approve the budget." So allow yourself to catch them in a lie by educating yourself—you can do so by picking up issues of *High Times* and staying a part of the community. Get involved. ✨

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DoSiDo turns purple when approaching maturity at House of Cultivar in Seattle.

SUBJECT: **Purple Leaf**

FROM: **Lori H.**

👋 I'm in New York State and my plants are almost ready to harvest. I noticed that on one plant, one leaf is turning a shade of purple. What does that mean? What am I doing wrong? It seems to have happened overnight, and it's the entire leaf.

Dear Lori,

Leaves can turn purple for a variety of reasons. Sometimes, low temperatures late in life can cause cannabis leaves to develop dark colors. A phosphorus deficiency can cause stems and some leaves to turn purple as well. Certain strains, such as Grape Ape, Granddaddy Purps and Blackwater, will also turn plum-colored as they mature. Judging from your region and the timing, I suspect that your leaves are turning purple because of cold weather. Don't worry—it shouldn't affect the flavor or potency of your flowers.



Danko Tip: Change the activated charcoal in your air filter every 18 to 24 months.

Grow tents are installed and disassembled with ease.



SUBJECT: **Getting Started in a Grow Tent**

FROM: **Robert**

🌿 I'm new to the cannabis industry, and I just started with a well-known dispensary, grow and production chain out of Portland, OR.

I've used cannabis in the last two years to treat depression, social anxiety and high levels of PTSD, as well as chronic pain from multiple fractures, breaks and tears that went untreated for many years. Cannabis gave me something with which to relate to people again. Obviously, I've got an intense history, and I had found myself nesting with other people refusing to leave their own battlefields and burning out by 35.

The company is very well-known and respected. I've got so much to learn it's crazy! Using cannabis in a recreationally legal state is very expensive, and it takes a lot of medicating to calm this crusty old brain down!

Any advice you'd be willing to offer on the lighting, growing and treatment of plants would be awesome. I've invested in a Gorilla Grow Tent, but this is my first grow and I've found a lot of contradicting information. Could you offer some resources or tips?

Dear Robert,
Depending on the size of your tent, I would recommend HID (high-intensity discharge) lighting such as MH (metal halide) or HPS (high-pressure sodium). For a 3' x 3' tent, use a 250- or 400-watt HID lamp. For a 4' x 4' tent, use a 400- or 600-watt lamp, and for a 5' x 5' tent, use a 1,000-watt lighting system. Be sure you have a strong enough exhaust fan to remove the amount of heat generated by the light you choose.

As for growing, get yourself a few 5-gallon buckets, cut holes in the bottoms and fill them with a loose and airy soilless

mix. Use a timer to set your lights to be on for 18 hours and off for 6 hours every day so that your plants will build up a root system as well as branches and leaves. This vegetative stage should last about a month or so until you change the timer to light your plants for 12 hours per day and keep them in the uninterrupted dark for 12 hours per day. At this point, they begin their flowering process, which usually lasts an average of 60 days or so.

Water the plants with plain water or a nutrient solution when the medium has dried out. Lift the buckets to get an idea of what they weigh when watered and how light they become when they need water. Change your nutrient solution based on the needs of the plants, i.e., whether they are in the vegetative stage or flowering. Always check the pH (acidity or alkalinity) of your soilless mix, water and nutrient solution to be sure it's in the proper range (6.0-6.8).



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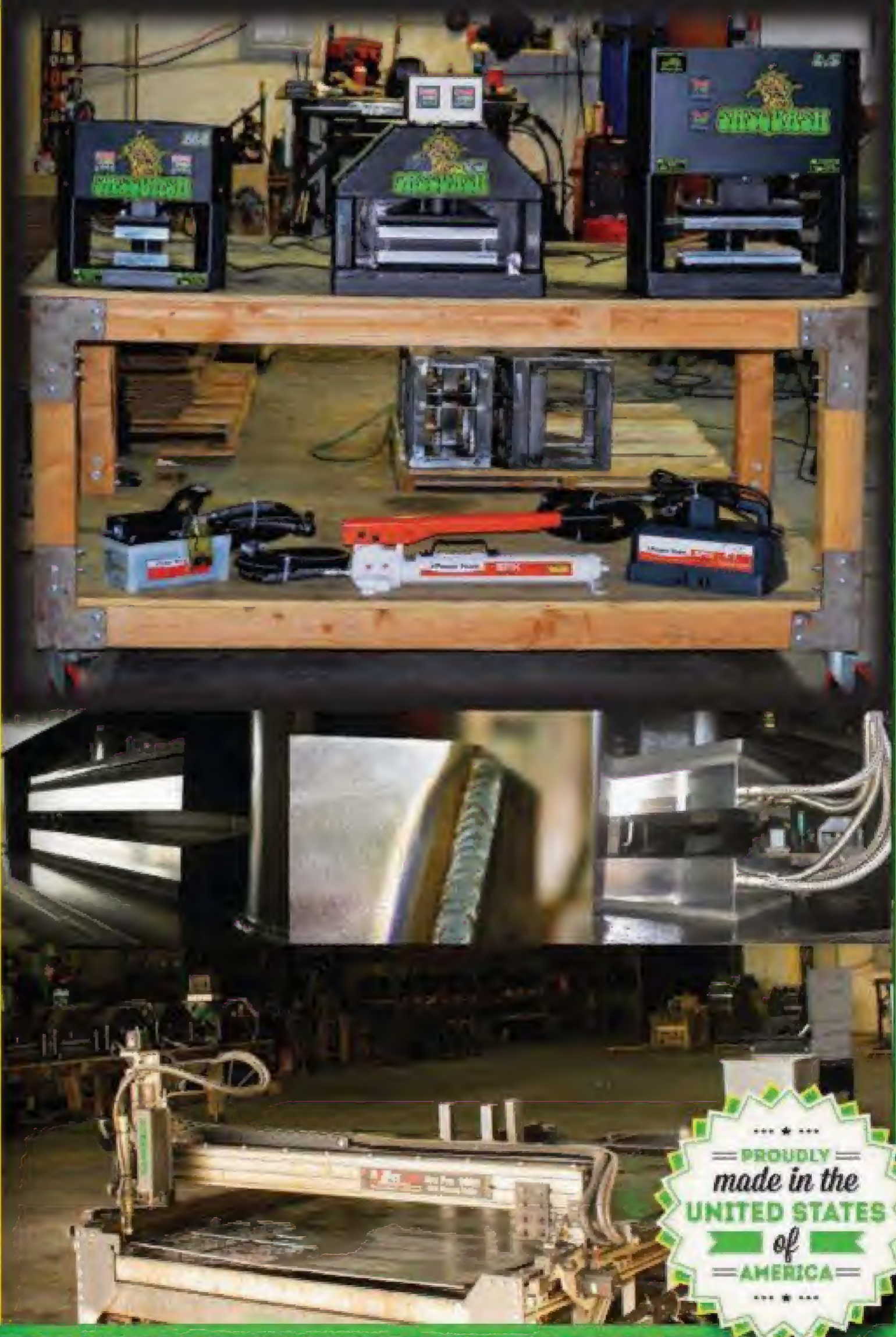
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- 4 x 250 Watt heaters. (1000 watts.)
- 10" x 5" 6061 Alum. Blocks.
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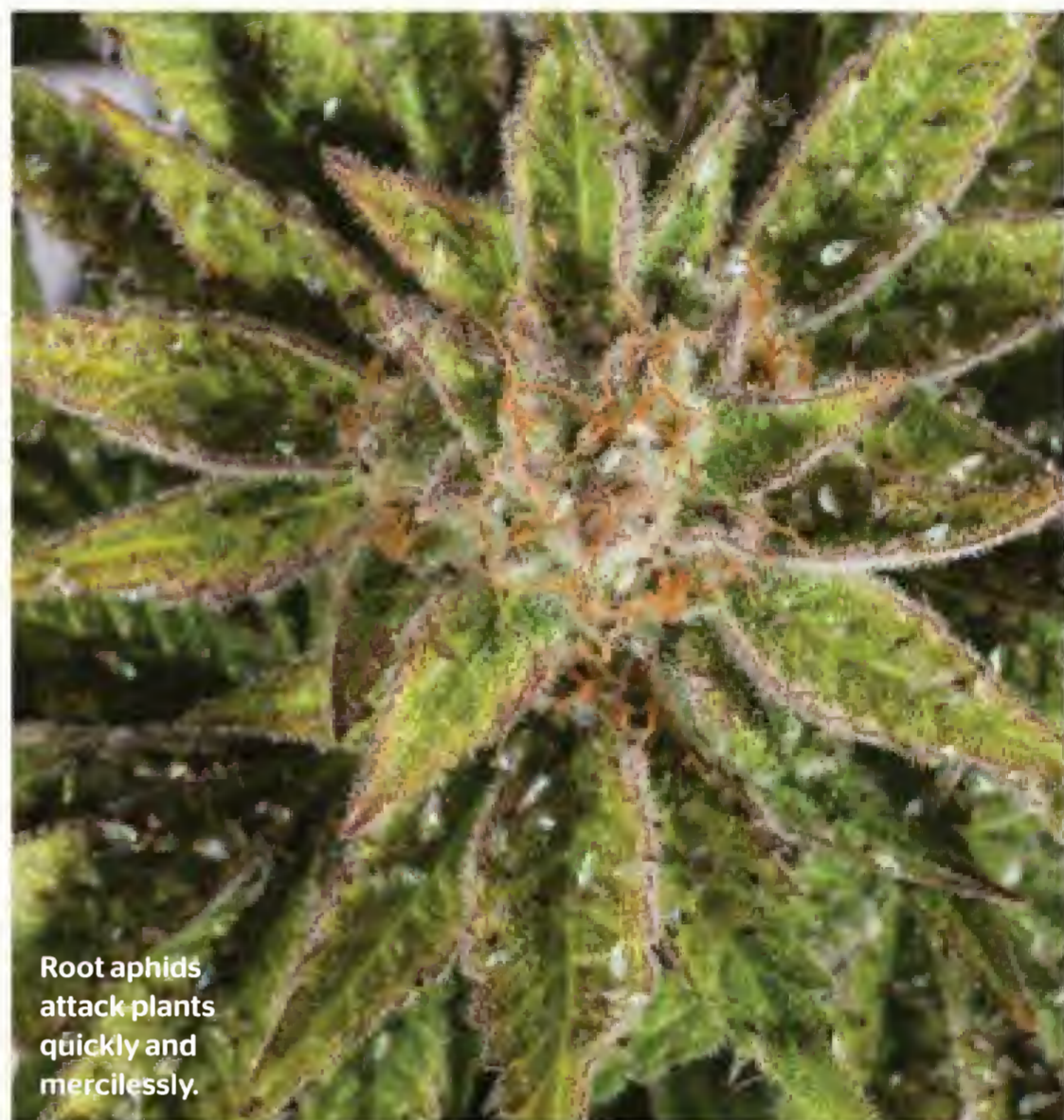
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Root aphids attack plants quickly and mercilessly.

SUBJECT **Root Aphids**

FROM: **The Calistoga Kid**

🐛 Bugs are crawling all over my roots, grow medium and plants. Some are even flying to other plants to set up shop! I thought they were fungus gnats, but my buddy who also grows came over and told me they're called root aphids. They're eating my plants. What do I do?

Dear Kid,

Ah, the dreaded root aphid! These things are a plague and seem to have been spreading far and wide, perhaps as a consequence of people sharing clones with each other. When young, these hard-to-spot bugs feed on roots below the soil or in hydroponic mediums. As they mature, they move up the plant and can even develop wings, all the while munching on your plants' vital cells and eventually causing serious damage or death. They leave behind a white waxy residue.

A root-aphid infestation can be easily misdiagnosed as a nutrient deficiency or an infestation of fungus gnats. These pests bore into hardy stems, causing serious damage quickly and exposing the plant to molds and diseases. They also thrive in high humidity and seem to prefer mediums that stay moist such as rockwool or expanded clay pellets (grow rocks). Root-aphid reproduction rates multiply quickly in hydroponic systems such as DWC (deep-water culture) buckets and NFT (nutrient film technique) tubes and trays.

Root aphids are extremely difficult to eradicate, but there are several ways to control their populations. They're asexual, so just one of them remaining in your garden can produce many more. If you have a serious infestation, it's best to just give up and start over, but only after a serious cleaning regimen.

If you were lucky enough to identify them early, reduce humidity and allow your room and medium to dry out as much as possible without killing your plants. Taking the temperature down to less than 60 degrees in your room and reservoir



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Danko Tip: Never allow law-enforcement officers into your house without a warrant.

using air conditioning and a chiller will induce root aphids into hibernation, allowing you to attack the various generations without them multiplying or crawling/flying away.

Many have reported varying levels of success using a soil-treatment product called Imidacloprid, which is a systemic solution, meaning it gets absorbed into the plant's tissue. I wouldn't use this within a month of harvest. I recommend spraying on, or dunking your plants in, insecticidal soap, being sure to get the aphids that inevitably try to escape up the plant stem or the winged ones that try to fly away. Some growers have also utilized predatory nematodes to attack the larvae. Biological control using Botanigard, an insect-killing fungus, as a root-zone inoculant has shown promise as well. Either way, root aphids come back quickly, so stay vigilant.

SUBJECT: **No Buds**

FROM: **Logan F.**

🌱 I have a friend who has two very nice plants that won't bud. They're about 3½ feet tall and we're pretty sure they're females. Just wondering if there's anything you could suggest. These are only grown in a window as well.

Dear Logan,

Your friend's plants won't start forming flowers because they are likely staying in their vegetative stage. It seems to me that they must be getting more than the 12 or hours or so of light necessary to induce flowering. If plants receive more light than that, or if the 12-hour dark period is interrupted with any light, they will continue to grow branches and leaves but will not form buds.

Tell your friend to ensure that his plants receive no more than 12 hours of light per day and to make sure the 12-hour period of darkness stays dark throughout that period. After doing this, flowers should start to form at the tips of their branches within a week or two. If they continue that way for approximately 60 days, depending on the strain, they will fill out and ripen into the buds your friend seeks.

SUBJECT: **Companion Planting Tip**

FROM: **MC Shaw**

🌱 I am a permaculture designer working with edible landscapes and food forests, and now I'm looking to improve grow soils. I find comfrey to be a great addition to your list of plants to support the grow. It has multiple benefits, such as bringing nitrogen from the lower levels of soil (roots go down to 3 feet deep) and releasing it in an absorbable form in the upper root zone. Comfrey can be used as chop-and-drop mulch, and it also makes an incredible concentrated plant food when covered in water for a week or so, then strained and used like liquid fertilizer. Many other herbs and plants can be used in a similar way. I'm impressed with the information you provide on organic growing and commend your effort to educate people on the process.

Dear MC,

Thanks for the kind words and the tip on the many uses of comfrey! There's so much to learn about sustainable methods of farming that apply to cannabis cultivation. 🌿

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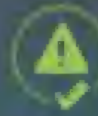
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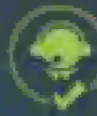
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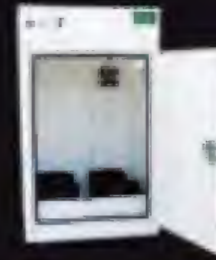
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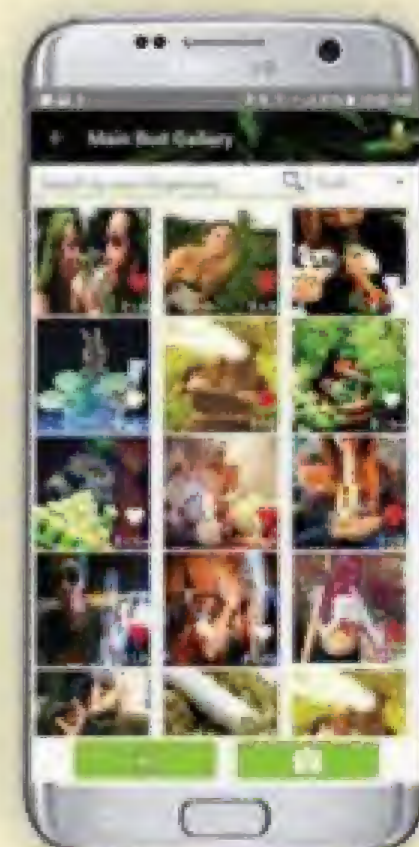
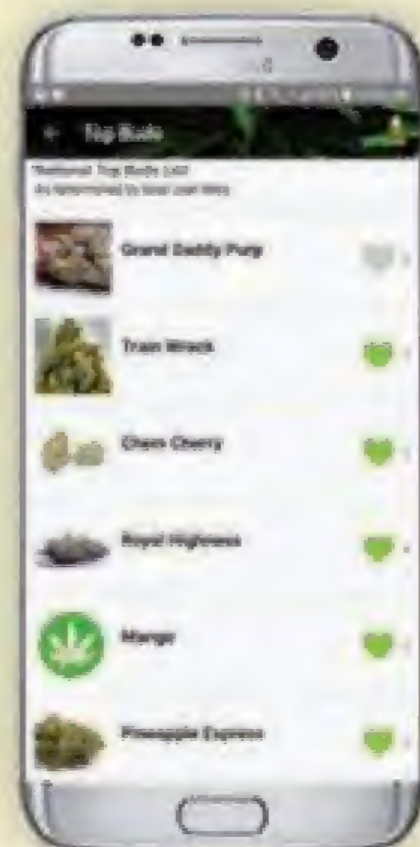
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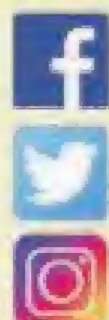
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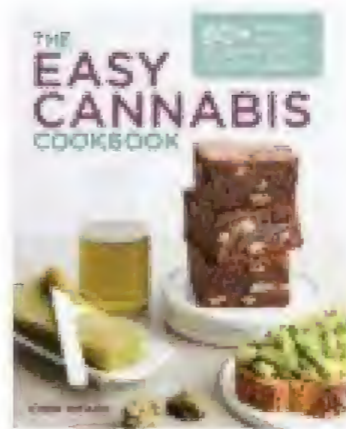
CHILL CANNABIS CHILI

INCREDIBLY EASY SLOW-COOKER CANNABIS CHILI THAT WILL LIVEN UP ANY PARTY! BY ELISE MCDONOUGH

IN A WORLD INCREASINGLY crowded with new cannabis chefs and cookbooks, it's good to have time-tested experts like Cheri Sicard, whose advice you can rely on. Known as "Cannabis Cheri" to her friends and fans online, Sicard is a committed activist who founded the Marijuana Lifer Project, which connects nonviolent prisoners of the War on Drugs with resources, pen pals and clemency campaigns. As an author, Sicard teaches people how to make their own THC-infused foods, with several books to her credit, including the newly released *Easy Cannabis Cookbook*, which details simple recipes for a variety of sweet and savory dishes.

This beef and bean chili is perfect for warming up during chilly weather, and using cannabis-infused olive oil makes this recipe much more chill! Mix up the ingredients in just 20 minutes and let your slow cooker do the work while you're out during the day, returning to a delicious medicated dinner, or make this the day before friends come over for Sunday football.

When dosed with a tablespoon of Sicard's cannabis oil, this chili contains 80 milligrams of THC, but be advised that your results will vary based on the potency of your cannabis. ✨



Check out *The Easy Cannabis Cookbook* online at cannabischeri.com, along with Sicard's handy THC dosing calculator.

INGREDIENTS

2 oz. dried chilies, such as New Mexico, California, guajillo, pasilla or a combination, about 6 to 8 chilies total
 1 corn tortilla
 1 tbsp. cannabis oil
 1 tbsp. salt
 2 tsp. freshly ground black pepper
 1½ tsp. ground cumin
 1 tsp. dried oregano
 ½ tsp. cayenne pepper (optional)
 3½ cups beef stock, divided
 4 tsp. extra-virgin olive oil, divided
 3 lbs. boneless beef chuck, trimmed of fat and cut into ¾-inch chunks, about 2½ lbs. after trimming
 1 medium yellow onion, diced
 1 tbsp. minced garlic
 1 15-oz. can kidney beans, drained
 ½ cup black coffee
 2 tbsp. apple-cider vinegar
 1 tbsp. brown sugar

Place the chilies in a cast-iron skillet over medium-low heat and toast until fragrant, about two minutes per side. (Be careful not to burn the chilies, as that will turn them bitter.) Place the toasted chilies in a bowl, cover them with boiling water and soak until they are soft, about 20 minutes, turning them once or twice.

Heat the tortilla in the dry skillet to toast it, about one minute on each side. Remove it from the heat. When it's cool enough to handle, tear it into pieces. Pulse the pieces into fine crumbs in a blender or food processor. Set aside.

Drain the chilies, then split them open to remove the stems and seeds. Place the chilies in a blender or food processor with the cannabis oil, salt, black pepper, cumin, oregano and cayenne (if you are using it). Purée the mixture, then add two cups of beef stock and continue to blend until you have a smooth paste. Transfer this to the slow cooker set on high.

Return the skillet to medium-high heat and add two teaspoons of olive oil. Brown the beef in two batches, turning each piece to brown all sides. Drain and add the cooked beef to the slow cooker.

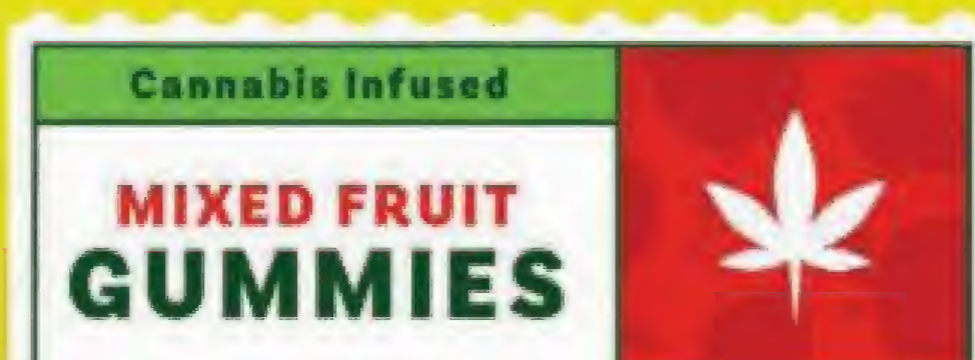
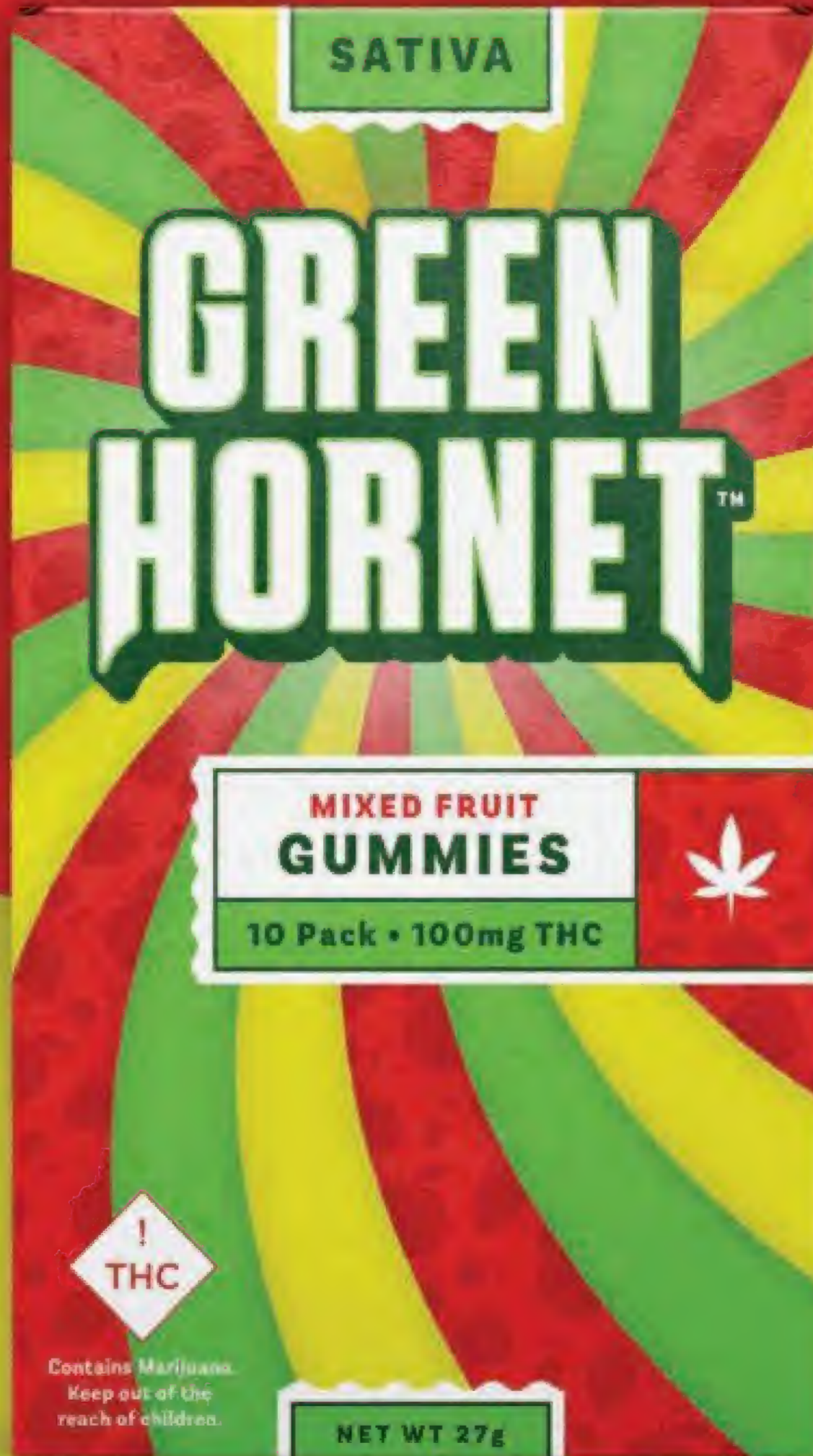
Add the remaining two teaspoons of olive oil to the skillet and add the onion and garlic and cook, stirring often, until the onion just starts to brown, about two minutes. Transfer to the slow cooker.

Add the puréed tortilla, beans, remaining 1½ cups of beef stock, coffee, cider vinegar and brown sugar to the slow cooker and stir to blend well. Cover and let cook for four to six hours or until the beef is tender.

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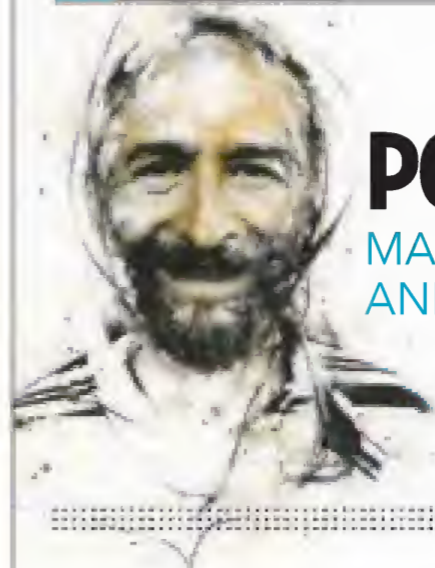
We are proud to welcome Jeffrey Warsh to establish a new cannabis industry practice group. Jeff is an alcoholic beverage and cannabis law attorney and registered governmental affairs agent with over 30 years of experience in highly regulated industries. Our practice group advises entrepreneurs in the complex and evolving field of cannabis law, providing guidance and insight into entity formation and capital raising, real estate and zoning, permitting and regulatory compliance, and enforcement and transactions related to the licensing of alcoholic beverages and cannabis.

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Got a question for Dr. Mitch? Email him at 420research@gmail.com.

I'm confused about how alcohol and cannabis interact.

Carrie Nation

Hey Carrie, Join the club! Alcohol slows THC metabolism. Although data suggest that THC has little impact on driving, when combined with alcohol it makes drivers genuine ding-a-lings. And recent studies emphasize that alcohol probably has a stronger link to cancer than we once thought. If you choose to drink, the American Medical Association suggests that one standard drink per day for women and two for men should be your maximum.

Other than yourself, who do you think should be the most famous marijuana writer?

Mark Eting Maven

Hello Mr. Maven, I'd love to see Fitz Hugh Ludlow, author of the 1857 classic *The Hasheesh Eater*, get a little more credit. His comments on life, consciousness, travel and writing are witty and fun. He's also the first US citizen to write a book-length treatise on the plant.

When I look at terpene concentrations in different strains, they are so low that I can't imagine they would have any effect. Is it possible?

Lester Moore

Hi Lester, Nothing is published, but even a quarter of a milligram of some substances can be

There's still much to learn about pairing pot and alcohol.



psychoactive, especially in combination with others. I think these terpenes are critical to any strain's effect.

I know there's a standard drink for alcohol, but is there a standard joint?

Wei N. Measure

Hi Wei, Researchers define a standard drink as a five-ounce glass of wine, a 12-ounce beer or a 1.5-ounce shot of 80-proof liquor. All of these contain the same amount of alcohol. For cannabis, it's tough because there's so much range in THC content and there are intake differences due to side-stream loss and inhalation size. Generally, though, a half a gram is a rough guess. My lab and others also ask folks how high they usually get, but you can imagine what a rough estimate of quantity that can be, too. 🌿

Dr. Mitch Earleywine, PhD, is the author of Understanding Marijuana and The Parents' Guide to Marijuana.

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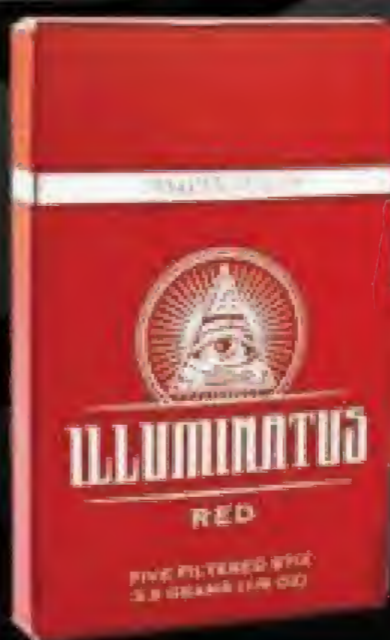
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VETS AND POT

VETERANS ARE NORMALIZING MARIJUANA USE. IT'S TIME FOR THE DEPARTMENT OF VETERANS AFFAIRS TO CATCH UP.

Justin Strekal is political director of NORML. Visit norml.org.

IN NOVEMBER OF last year at a Capitol Hill event organized by the American Legion, veterans presented their personal stories about the efficacy of marijuana as a therapeutic treatment for a litany of conditions. Surrounding them were lawmakers from both sides of the aisle.

Their stories were deeply personal. Joshua James Frey, an Iraq War vet, told the assembly, “I feel like I did before the war [in Iraq] mentally and... know this could help not just the veterans struggling, but it could help anyone struggling with addiction and PTSD [post-traumatic stress disorder]. It’s time we all stand as one voice and truly move forward with real hard-line research and move forward with real compassionate care.”

But you don’t have to just take Frey’s word for it. According to a poll conducted by the American Legion, 22 percent of veteran respondents said they “use cannabis to treat a mental or physical condition,” and 39 percent affirmed they “know a veteran” who uses marijuana medicinally.

Despite these numbers, there is a tremendous amount of confusion and bad policy behind the scenes at the US Department of Veterans Affairs.

Veterans living in states where medical marijuana is legal regularly call NORML expressing concerns about

[VETERANS] FEAR THAT USING MARIJUANA FOR MEDICINAL PURPOSES, EVEN WHERE IT’S LEGAL, WOULD RESULT IN A LOSS OF THEIR VA HEALTH-CARE BENEFITS.

discussing their cannabis consumption with their local VA doctor. They fear that using marijuana for medicinal purposes, even where it’s legal, would result in a loss of their VA health-care benefits. While this isn’t VA policy, it certainly is the perception.

Because of this constant confusion, the Department of Veterans Affairs in December issued a policy-guidance update encouraging greater communication about cannabis between doctors and veterans. Specifically, the directive urges doctors to foster discussions with veterans about their cannabis use “due to its clinical relevance to patient care” and affirms that “veterans must not be denied VHA [Veteran Health Administration] services solely for participating in state-approved marijuana programs”—a small but essential clarification for those who have sacrificed so much.

Unfortunately, the policy-guidance update continues forbidding physicians from explicitly recommending cannabis

as a therapeutic option in states where the substance is legal. VA doctors are prohibited from providing the paperwork necessary to complete a recommendation, thus forcing military veterans to seek the advice of a private, out-of-network physician.

Congressman Earl Blumenauer (D-OR) has sponsored the Veterans Equal Access Act, legislation that would remove this restriction on VA doctors. However, the bill has yet to even be scheduled for a hearing in Congress. In an effort to create temporary changes last year, Representative Blumenauer offered an amendment as part of the 2017 Military Construction, Veterans Affairs, and Related Agencies Appropriations Act. However, Republicans sitting on the House Appropriations Committee shamefully decided to remove the language at the last minute during a conference-committee vote.

Tearing down the walls of cannabis restrictions for veterans and military personnel might be the last substantial victory needed in the removal of marijuana from the Controlled Substances Act and the senseless policy that is federal prohibition.

You can contact your federal lawmakers in support of the Veterans Equal Access Act and other pending legislation at norml.org/act. 🌿

FREEDOM FIGHTER

By Kevin Mahmalji, NORML national outreach coordinator

ILLINOIS ACTIVISM WORKING TO FREE CANNABIS IN THE LAND OF LINCOLN.

Ali Nagib has been involved in cannabis activism for nearly a decade. From assisting with the passage of the Illinois Compassionate Use of Medical Cannabis Pilot Program Act in 2013 and supporting its implementation to a statewide decriminalization measure in 2015 and various industrial-hemp-related bills, Ali has been instrumental in

the advancement of progressive cannabis policy in his state. He currently serves as assistant director of Illinois NORML.

While the majority of his work is focused on policy and politics, Ali also spends his time coordinating citizen lobby days in Springfield on a regular basis and assists with organizing the annual Chicago Global Cannabis March.

“Prohibition is ending,” says Ali. “The only questions remaining are how and when it ends in Illinois



and beyond, and it’s my goal to ensure that those questions are answered in a way that’s in the best interests of everyone in the cannabis marketplace, including patients, and that the wrongs of the Drug War are remedied and its victims given some recompense.”

In addition to his policy work, Ali has been interviewed by numerous TV, radio, print and Internet media outlets and has spoken about cannabis-policy reform on

conference and symposium panels, facilitated presentations at universities and high schools, and conducted seminars for both patients and prospective business owners throughout Illinois. Ali continues to cultivate positive relationships with lawmakers and regularly engages other cannabis-related groups. A lifelong Illinois resident, he holds a bachelor’s degree in economics and an MBA from the University of Illinois Urbana-Champaign. He lives in Chicago with his wife and two children.

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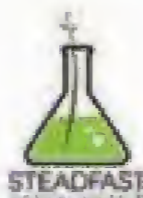
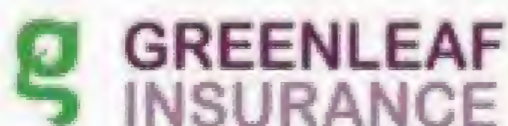
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CUTTING-EDGE CRYPTOCURRENCY

How The SYB Token Intends To Solve Every State's Cannabis Taxation Problem.

Scott Holtby is a freelance writer with a pulse on cannabis industries:

Many states are moving forward in legalizing access to cannabis for both medical and recreational purposes. A new multi-billion dollar cannabis industry has grown out of these efforts, with intense debate on who should benefit the most from the new economy. For example, should it be the pioneering activists or the new canna-entrepreneurs?

Either way, one thing has become clear:

States are eager to take their fair share as a reward for pushing through the necessary legislation and regulations.

States have a number of revenue streams available, from selling licenses to charging fees. But nothing compares in importance to the potential tax revenues from cannabis transactions.

Colorado has been leading the development of the legal cannabis model in the United

States, legalizing medical marijuana in 2000 and recreational access in 2014. A report in *CNN Money* on July 19, 2017, quotes analysts predicting that state's cannabis revenues will surpass \$500 million by the end of the year. And Colorado only has 5.5 million residents.

It is no surprise that these strong early results have doubled down the interest of state regulators across the country. With legal access to medical and recreational cannabis markets growing in larger states like California, cannabis revenues could become a key contributor to any state's budget. This momentum is driving more support for legalization among even skeptics as the evidence continues to mount.

Despite success stories like Colorado, there remains serious suspicion among cannabis analysts and experts that states are missing out on a large chunk of potential revenue. This stems from the inefficiencies of the current sales market across the country. Since cannabis

is still a controlled substance from the federal government's perspective, large financial institutions like banks and credit cards have shied away from the market. This has led to a cash-based industry, ripe for underreporting and misrepresentation.

This lack of transparency is hurting all states' cases for greater legalization and access to cannabis markets from coast to coast. All states need a stronger and more efficient system to monitor cannabis transactions and collect taxes. And in an increasingly digital world, states must embrace innovative technology over cash-based systems.

Luckily one company is tackling this problem head on with the latest technology. Embracing Blockchain technology – like the kind that powers *Bitcoin* – *Support Your Buds LLC* is developing a cannabis-specific Cryptocurrency to facilitate transactions. But unlike previous attempts to integrate Cryptocurrency and cannabis,

Support Your Buds is committed to solving the state taxation problem directly.

Support Your Buds is partnering with cannabis technology leader *Alternate Health (CSE:AHG)* to integrate their Cryptocurrency with the *CanaPass* controlled substance management system. This system facilitates transactions and payments between licensed producers, medical doctors and cannabis patients or consumers, keeping secure and transparent records for both the medical and recreational cannabis industries.

Most importantly, *CanaPass's* automatic tax reporting mechanisms can work together with the *Support Your Buds* Cryptocurrency to ensure states receive exactly the revenues and remuneration they are entitled to. With greater revenues, state governments have strong incentives to support patient access to cannabis and enact sensible legislation for all citizens in their jurisdictions.



supportyourbuds.com

Women In Cannabis



Lauren Rudick
Partner, Hiller PC
Manhattan, NY

Lauren Rudick is a Partner at Hiller, PC, in Manhattan, NY, and a member of the legal team that brought a federal action suit against Attorney General Jeffrey Sessions and Chuck Rosenberg for a declaration that the misclassification of cannabis as a Schedule I drug is unconstitutional.

▶▶ What inspired your decision to accept the case against Jeff Sessions?

It was our brainchild. Michael Hiller (managing partner) and I attended a few meetings of the New York Cannabis Bar Association, consisting of a group of lawyers who sought to challenge New York's overly restrictive medical cannabis regulations. In thinking through various potential causes of action for that case, we realized quickly that the strongest claims were constitutional in nature, should be lodged against the Federal government, and belonged in Federal Court.

We then thought through all of the different ways that individuals and businesses are "damaged" or suffer with "irreparable harm" as a result of the unconstitutional classification of cannabis as a Schedule I drug, reached into our personal networks, and found our plaintiffs.

▶▶ How do you address the argument against children using medical marijuana?

It really depends on the condition at issue, but I would encourage them to step outside traditional comfort zones, talk to physicians who specialize

Continued ...▶▶



INITIAL COIN OFFERINGS

The Latest Trend in Cannabis Investing

Nick Swan is an avid investor and advocate for Medical Cannabis Industries

It's no secret that Cannabis companies have faced unfair roadblocks over time, especially when it comes to raising capital using the traditional methods.

And they aren't alone in these difficult circumstances. But with some creativity and innovation in the cannabis community, new concepts are being adapted and developed that will change how companies raise money.

The most exciting new idea is the ICO, or Initial Coin Offering.

Companies use ICOs as way of selling investors up front participation in an "economy," generally at a discount, that allows them to benefit from future gains on a digital, Blockchain-based currency.

As Don and Alex Tapscott, authors of 2016's *Blockchain Revolution*, put it:

"The Blockchain is an incorruptible digital ledger of economic transactions that can

be programmed to record not just financial transactions but virtually everything of value."

Economies and markets built on Blockchain technology can function with a digital currency – or cryptocurrency – based transactions, with access to the currency initially launched through an ICO.

As Blockchain technology expands across the cannabis industry, new opportunities will be created for cannabis-focused cryptocurrencies.

For example, *Alternate Health* (CSE:AHG) has recently purchased a Blockchain-enabled mobile payments system to complement their *CanaPass* controlled substance management software. This technology ensures secure, transparent and trackable transactions in much the same way an ICO is used to raise capital.

At the end of the time limit or when the full number of tokens

are sold, and the currency is live can be used for transactions. Investors can spend it, sell it or hold on to it for future gains.

Often this way of raising capital for Cannabis companies can be a more independent, transparent and quicker method for companies to get funding. For investors the important thing, as always, is to do your research to make the best of your investment in this dynamic industry.

The coins or tokens in question can appreciate in value just as stocks do in the public market, while the company making the offer generally uses the capital to fund their business. But unlike an IPO that offers a stake in the ownership the company itself an ICO sells a right of ownership or royalties to a project.

This technology ensures secure transparency with the potential to integrate digital currency transactions as the crypto-cannabis industry evolves.

Visit: Alternatehealth.ca

Take Note How Do Investors Buy Into An ICO ?

✓ Register

Many ICOs are based on previously existing cryptocurrency like Ether. There are a number of online exchanges, so do some research and sign up for an account with an exchange that support's your ICO of interest.

✓ Transfer

Transfer USD, EUR, CAD or any relevant currency from your bank account to your registered account with the exchange. Use this capital to buy Bitcoin, Ether etc.

✓ Exchange

Create a digital wallet under your control where you can move your coins unless the ICO you wish to participate is offered on your exchange. Many start with an Ethereum wallet as most token sales take place through that network.

✓ Buy

No two ICOs are identical, but there are key similarities. A timeframe will be laid out with a number of tokens being offered. Most ICOs will have detailed instructions on how and when to participate along with all agreements inherent in the purchase.

in treating pediatric patients with medical cannabis, and talk to parents, and the children who rely on it. There's no harm in learning more, particularly when many of the medications medical cannabis can replace have disastrous, proven side effects.

▶▶ Why is this case pivotal for the Canna?

We are at a tipping point, where more than half the nation believes cannabis should be legal and lives in a jurisdiction in which some form of cannabis is legal. California is on the verge of full legalization (which is the 5th largest economy in the world, after Brexit),

the government has already declined to enforce the Controlled Substances Act against state-compliant medical cannabis businesses and individuals and has de-funded the DEA accordingly, sophisticated economies globally are recognizing benefits of legalization, and the campaign of misinformation has been largely debunked and overshadowed with promising research and success stories. The nation has been hurt and divided since last November, but the legalization of cannabis stands to unite everyone. From the left, we will address social justice reform and patient advocacy. And from the right, we will address states' rights, and our constitutional

guarantee to be free from congressional overreach. The criminalization and stigmatization of cannabis is an injustice that makes no rational sense, and the American people are waking up to that.

▶▶ What's overarching reason behind the lag in the nation-wide legalization of Cannabis?

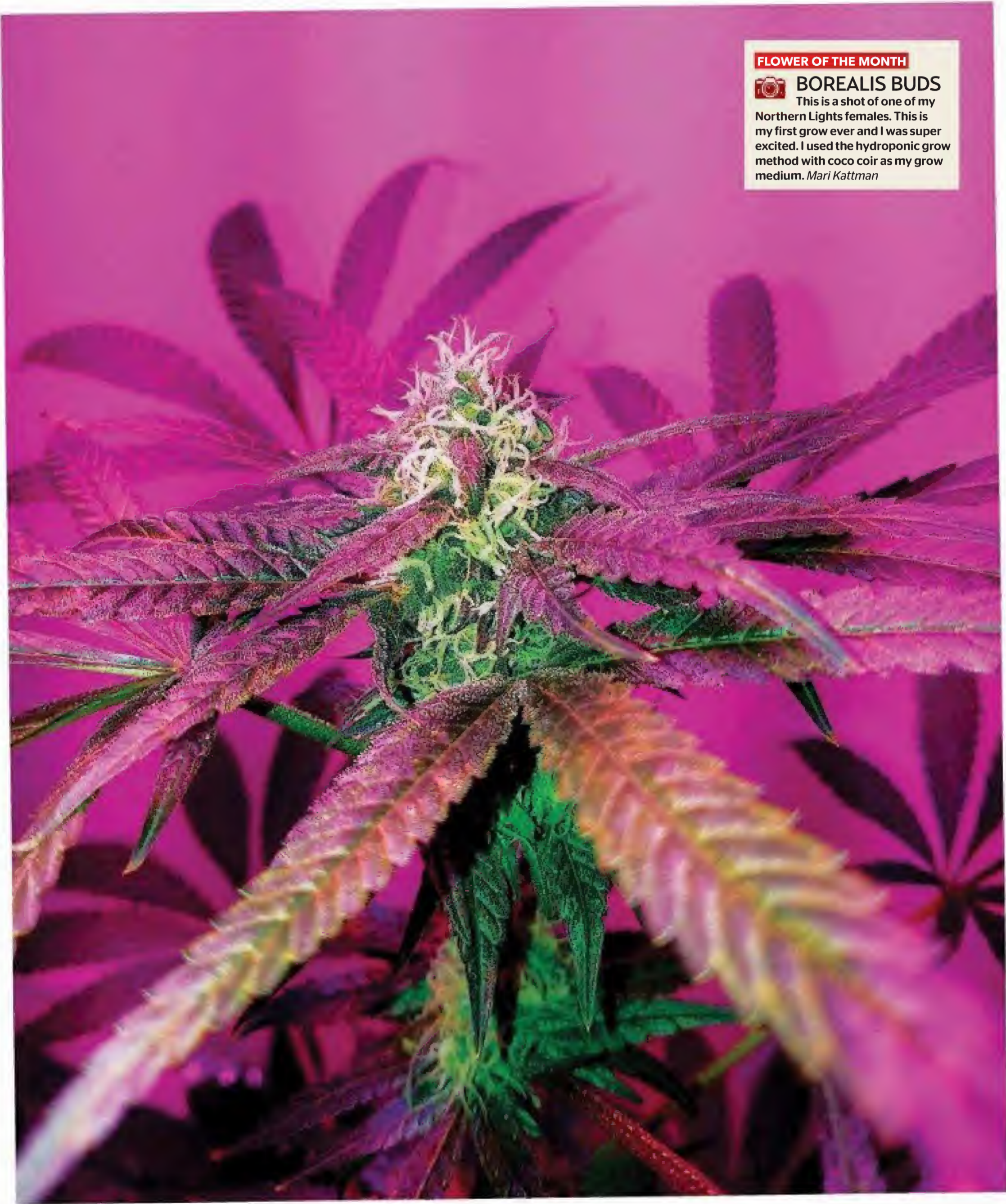
Hearts and minds need to change, and education is the key. We've been suffering with a political campaign, rooted in racial animus, deliberately designed to mislead the American people with regard to the safety and medical efficacy of cannabis.




POT SHOTS

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FLOWER OF THE MONTH
 **BOREALIS BUDS**
This is a shot of one of my Northern Lights females. This is my first grow ever and I was super excited. I used the hydroponic grow method with coco coir as my grow medium. *Mari Kattman*

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GROW OF THE MONTH

NORTHERN EXPOSURE

I'd love to participate in photo submissions! Not sure if "Thumper" qualifies or how your submissions even work but I thought what the hell. The yield from this old girl was just over two pounds. Cheers! *Ashton from Nova Scotia*



NUG OF THE MONTH

AUSTRALIAN GREEN

Long time fan and reader here! I contributed way back in 2002 so it's been a while! I call her "The Resin Dawg." She's a cross of some Thai x Blue Dream from Humboldt Seeds and a special male I have named the "Secret Sauce." Peace and love! *Big J & Miss R in Australia*



CLOSE UP OF THE MONTH

ESSENTIAL OIL

I've been a professional photographer for 30 years in Toronto, Canada. I'm also licensed by the Canadian Federal Government to grow. The strain is Black Dog from Lush Cannabis Co. *John Rutledge*

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DOPE RIDER

DOPE RIDER IS WORKING OFF HIS BAR TAB AT MANNY'S SALOON.

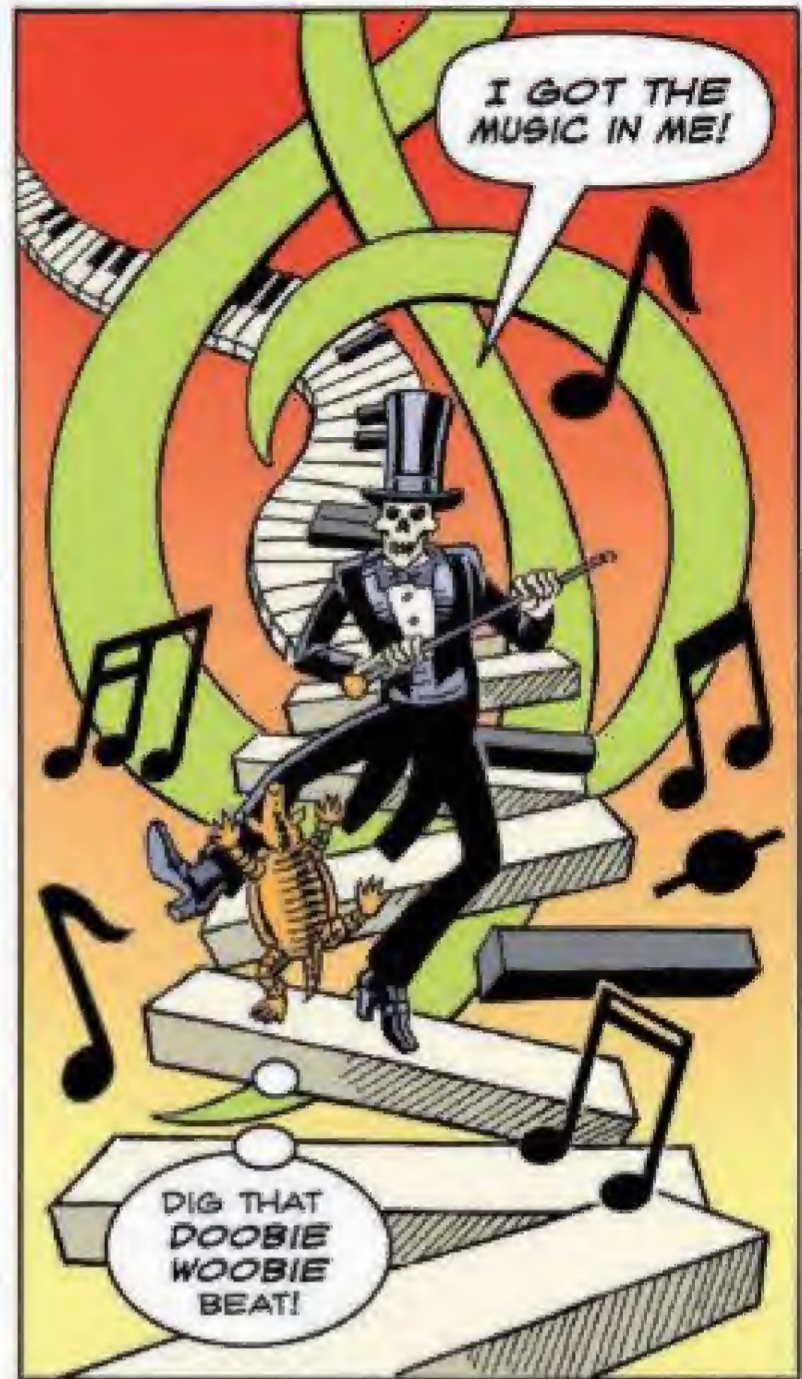
KICK IT UP A NOTCH, PIANO MAN! THIS AIN'T NO DANG FUNERAL PARLOR!

PHILISTINES...



I DRAW MY INSPIRATION FROM NATURE.

AND HERE IT COMES NOW.



I GOT THE MUSIC IN ME!

DIG THAT DOOBIE WOOBIE BEAT!



BEAT DRUMS!

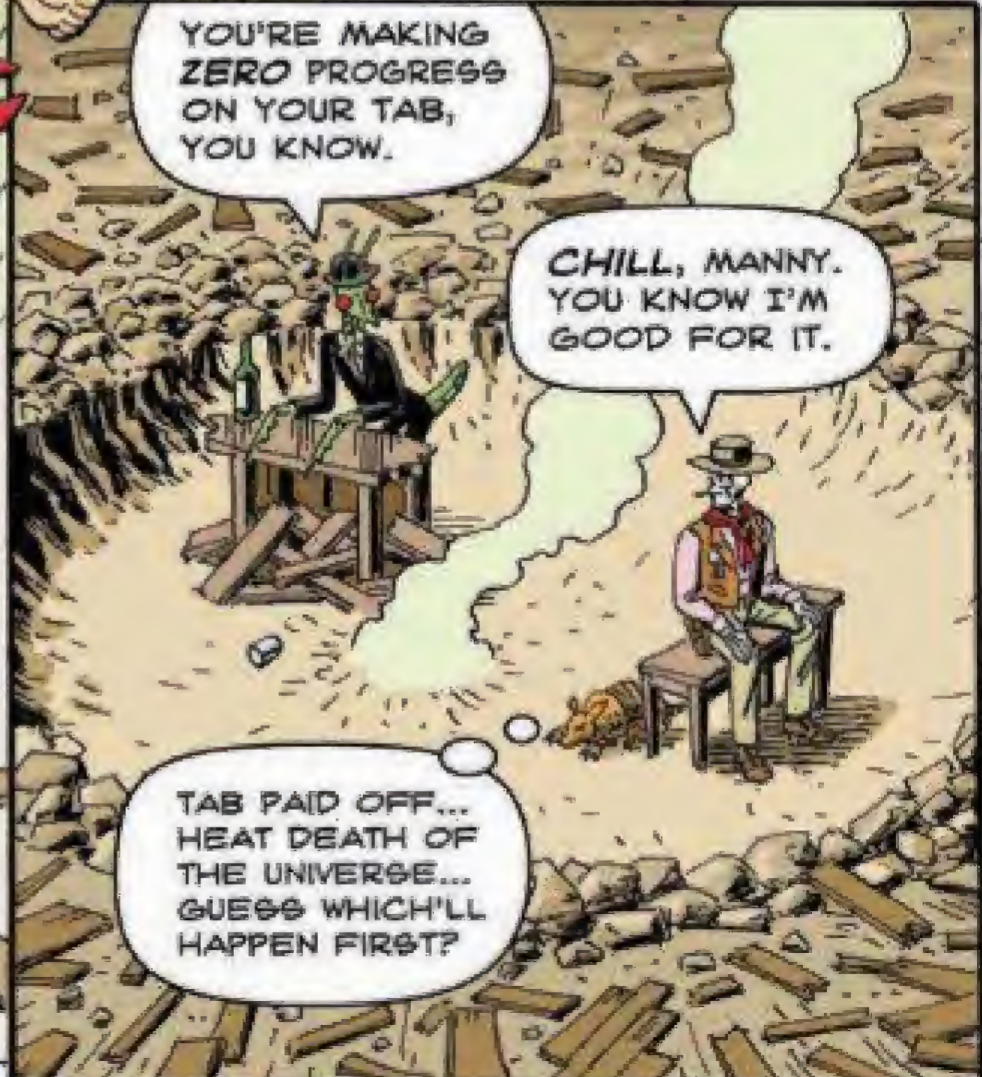
YIPPEE KI YAY!

BY PAUL KIRCHNER

SHRED IT!

HALLELUJAH!

NO! NO! SOME GENRES WERE NEVER MEANT TO COEXIST!



YOU'RE MAKING ZERO PROGRESS ON YOUR TAB, YOU KNOW.

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TAB PAID OFF... HEAT DEATH OF THE UNIVERSE... GUESS WHICH'LL HAPPEN FIRST?

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Balt Getty featuring Method Man & KO

Caligula featuring Wiz Khalifa

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Tosh 1

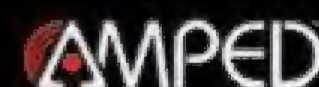
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INSIDE THC DESIGN

Take a look behind the scenes at Los Angeles's THC Design and meet a cultivation crew determined to grow some of SoCal's finest cannabis—cleanly and sustainably, yet with an eye toward advanced practices and techniques.

ALL ABOUT TERPS

Words like “terpenes” and “entourage effect” are used often in cannabis conversations these days, but what is really behind these terms and what do they mean for the everyday smoker? Join us for an in-depth look at terpenes, their effects, and their interactions with cannabinoids such as THC and CBD, as we delve into the mystery of these omnipresent and all-important molecules that make our favorite strains what they are.


THE HIGH TIMES 100

High Times is breaking down the best of the best in the world of weed to present the definitive list of the 100 most important and influential people in cannabis. Get to know the leaders of our industry and how they are shaping the future of cannabis.

THE TRUE NORTH STRONG AND FREE

As Canada prepares to legalize recreational cannabis nationwide this summer, we visit several top pot spots across the country to check in with marijuana businesses and consumers to ask: How will legal weed affect the Canadian economy and culture?

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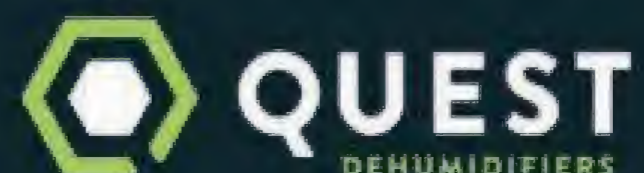
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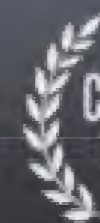


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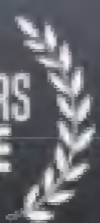
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